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TECHNICAL INFORMATION

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FOTECOAT 1836 WR SOLO

**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 coating 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 degas; this way air 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.

5. **Storing**

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|---|-------------|
| Shelf life: | 1 year |
| Storing time for coated stencils (in complete darkness): | 2 - 3 weeks |
| Storing time for coated stencils in black plastic pouches, sealed, at storing temperature of 20°C and relative humidity of 50 - 70 %: | 3 months |
| This ready-to-coat emulsion should be stored in a closed can, protected from direct actinic light. Protect also against freezing. | |

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 presensitised 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:
 - on 120T yellow 20 micr. stencil thickness proud of a mesh ca. 40 sec.
 - on 77T white 25 micr. stencil thickness proud of mesh ca. 35 sec.
 - on 43T white 35 micr. stencil thickness proud of mesh ca. 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.

7. Decoating

- 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, ready-to-use
 - FOTECHEM 2044:** powder; dilute 100 g in 7 - 10 l of water
 - FOTECHEM 2005:** paste; recommended for large size stencils
 - FOTECHEM 2042:** concentrate, dilute 1 part with 30 parts of water. Recommended for machine decoating.

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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