

FOTECOAT 1850

Presensitized, polymer, solvent resistant, ready-to-coat screen emulsion

1. DESCRIPTION

- ◆ Extremely fast polymer emulsion, presensitized; free of Diazo
- ◆ For ink systems based on solvents
- ◆ Working under yellow light is recommended because of the increased light sensitivity
- ◆ The emulsion has a light grey-blue color; the stencil has excellent see through
- ◆ Harmless for sewage water and at the working place if standard industrial precautions are followed

2. APPLICATION ADVANTAGES

- ◆ No mixing; does not need degassing: therefore less pinholes
- ◆ Best print results are achieved on dyed- and steel mesh
- ◆ The exposure time on dyed mesh corresponds to approximately 40% of FOTECOAT 1010 or 15% of FOTECOAT 1569
- ◆ No post-exposure needed
- ◆ High resolution with precise stencil edge sharpness thanks to high content of solids (36%)
- ◆ Low viscosity for manual and machine coating
- ◆ Ideal for thick film stencil production
- ◆ Can be removed with the usual remover products

3. MANUAL AND MACHINE COATING

- ◆ Manual: The ready-to-coat emulsion can be used by the 1/2 or 2/2 technique
- ◆ The viscosity is ideal for coating machines
- ◆ To produce a flatter stencil profile and a lower Rz-value - to improve the print edge sharpness - additional coatings are possible after intermediate drying. The stencil thickness increases by 1-2 microns and the Rz-value is lowered with each additional coat onto the dried surface
- ◆ If the emulsion is poured back into the can after coating, it will be necessary to check before the next coating if the emulsion is degassed completely; check if there are no longer air bubbles on the emulsion surface. The reason is, that like all screen-emulsions, air is sucked into the emulsion during stirring or coating. Such air bubbles are the main cause for pinholes.

4. STENCIL QUALITY

The excellent wet hardness and the low swelling characteristics during the wash-out produce stencils with unique mesh bridging characteristics. Therefore an excellent stencil edge sharpness is guaranteed. Coupled with the very high resolution power at short exposure times, unsurpassed quality stencils are achieved on dyed mesh or steel if the correct coating technique and drying position is used.



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info.fotec@saati.com

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5. STORING

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

Condition	Service Life
Unsensitized, 18-25°C storage	2 years
Pre-coated screens in total darkness at 20°C	4 weeks

6. EXPOSURE TIMES

- ◆ All light sources with a spectral light output between 340-400 nm can be used
- ◆ Metal halogen lamps with an iron charged burner or a gallium/iron burner are ideal
- ◆ The loss on UV-light during the working time of the lamp must be considered (approximately 10% per 100 burning hours)
- ◆ This emulsion has a very high light sensitivity. The exposure latitude is therefore reduced. This needs a careful step wedge to find the optimum result in respect of exposure time. Longer exposure produces better mechanical resistance of the stencil but shows losses in the resolution
- ◆ Exposure time with a 5 kW MH-lamp, type Akticop 3500 S, at 100 cm distance on yellow mesh 120T-34 and 13 microns stencil build-up is approximately 20 seconds. (Coating 1x printing side, 3x squeegee side, wet in wet)
- ◆ White mesh is responsible for strong light scattering; the print result will suffer

7. STENCIL REMOVAL

- ◆ The old rule is valid: The better the hardening of the stencil system through a longer exposure time, the easier the stencil removal
- ◆ This screen emulsion is free of Diazo. Therefore no brownish residues on the mesh; the removal of ghost images is simplified
- ◆ The stencil removal is simplified if the ink is removed immediately after printing. Then firstly degreasing with FOTECHEM 2003 ready-to-use or FOTECHEM 2033 Concentrate, diluted 1:10, is recommended
- ◆ 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
- ◆ To speed up removal a high pressure device is recommended. Important: Hose off with soft spray first to remove the chemicals, then only use the power spray
- ◆ Ghost images: Brush on FOTECHEM 2085 (a blend of emulsifying solvents), then apply FOTECHEM 2080 (high alkaline paste) with a brush; let stand for maximum ½ hour, then hose off with mild spray before the residues are removed with a high power spray. Increase pressure to 100 bar or higher if residues are very stubborn

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info.fotec@saati.com