

FOTECOAT 1850

Fotopolymer Emulsion for production of solvent resistant stencils

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 µm 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.

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	24 months
Pre-coated screens in total darkness at 20°C	4 weeks

6. EXPOSURE TIMES

- All light sources with a spectral light output between 340-405 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 120-34 and 13 µm 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.

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7. STENCIL REMOVAL

All commercial decoaters can be used. A high pressure gun is recommended. Stencil removal is only possible, if the screen has not been hardened chemically.

FOTECO offers several stencil removers:

- **FOTECHEM 2005** Paste
- **FOTECHEM 2042 S** decoater concentrate 1:30

Ghost images can be removed with **FOTECHEM 2089**.