

FOTECOAT 1830

One component Photopolymer emulsion - for printing water or solvent based inks, also ideal for abrasive printing media

1. DESCRIPTION

- ◆ Ready to use emulsion
- ◆ Red, medium viscosity, 47% solid content
- ◆ Exposure time of 1830 is about 50% slower compared to 1833 and therefore the resolution is accordingly higher.
- ◆ Resistant to plastisol, water and solvent based, UV-, sublimation- and discharge inks
- ◆ Outstanding abrasion and humidity resistance
- ◆ Excellent print definition on any mesh

2. APPLICATIONS ADVANTAGES

- ◆ Resistant to discharge inks without adding Diazo or hardening with catalyst
- ◆ Exposes 4 times faster than Diazo or dual-cure emulsions
- ◆ Can be coated wet on wet without intermediate drying



3. COATING TECHNIQUE AND STENCIL BUILD-UP (COATING TROUGH .75 MM R)

Mesh	Coating	Stencil Thickness below mesh
71.55 White	1/2	24 µm

4. EXPOSURE

- ◆ 1830 has high sensitivity to UV light and is suitable for use with DLE machines
- ◆ Many variables, such as lamp type and age, distance from lamp to screen, mesh type and coating thickness, can affect exposure time
- ◆ Perform an exposure test a exposure calculator (21 Step Sensitivity Guide) to determinate correct exposure time for a complete cure
- ◆ Ensure that all surfaces (emulsion, film and glass) are free of dust to minimize pinholes
- ◆ Contact the emulsion side of the positive with the substrate side of the screen and secure in position before placing the screen in a suitable vacuum frame
- ◆ Post expose with daylight or exposure lamp to produce a more water-resistance stencil!

5. STENCIL QUALITY

- ◆ Perfect mesh bridging is possible
- ◆ After wash-out the stencil is very hard and has low swell characteristics

FOTECO

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6. 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	18 months
Pre-coated screens in total darkness at 20°C	4 weeks

7. STENCIL REMOVAL

Remove all ink residues immediately after printing with an appropriate solvent. All commercial decoaters can be used. A high pressure gun is recommended.

FOTECO offers several stencil removers:

- ◆ 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

The longer the exposure, the better the through-curing of the stencil. If necessary make a post exposure. Both render the decoating easier.

For the regeneration of the decoated mesh FOTECHEM 2080/2085 or 2089 can be used to remove all ink and emulsion residues; jet wash is necessary.

7. HEALTH & SAFETY

Before using, refer to appropriate material safety data sheet (MSDS).

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THICK FILM STENCILS FOTECOAT 1846 SOLO

FOTECO

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FOTECOAT 1846 SOLO has a high viscosity between FOTECOAT 1845 SOLO and 1847 SOLO. The usage of this screen emulsion is described in "Technical Information FOTECOAT 1845 SOLO".

FOTECOAT 1846 SOLO is ready to use, presensitized and usable for the production of thick stencils by the wet in wet coating method.

FOTECOAT 1846 SOLO is blue and has a solid content of 44% coupled with a very good solvent resistance. A post-exposure improves the curing whereas a chemical hardening increases the water resistance.

FOTECOAT 1846 SOLO can be applied on polyester meshes from 21 to 77 by manual or machine application. The stencil thickness over the mesh depends on the number of coats from the squeegee side (and naturally on the mesh number).

For the application the following hints should be considered:

1. MANUAL COATING

- ◆ 2x printing side, 2x squeegee side wet in wet
- ◆ Scrape from both sides
- ◆ Apply the necessary number of coats from the squeegee side, wet in wet



THICK FILM STENCILS FOTECOAT 1846 SOLO

2. BY MACHINE

- ◆ 2x printing side
- ◆ Apply the necessary number of coats from the squeegee side, wet in wet

The drying should be done with the print side downwards during the first 15 minutes, afterwards turn the screen with the print side upwards and dry at the maximum temperature of 30°C.

The exposure time with a 5 kW metal halide lamp at 100 cm distance to the vacuum frame can be calculated as follows:

On white mesh for every 100 micron total stencil thickness (thickness of the mesh + stencil thickness over the mesh) = 1 minute; on yellow mesh 1 minute and 40 seconds.

It is recommended to make a test exposure with a step wedge to find out the correct exposure time.

The wash-out should be done as follows:

- ◆ Immerse the exposed stencil in a water bath at 25 – 30°C
- ◆ Then spray with a good water jet the softened parts of the openings until they are clear
- ◆ An excellent tool to wash-out adequately is the Flottmann water pistol
- ◆ A very high water pressure should be avoided because the stencil is relatively soft during the wash-out process

The chemical hardening with FOTECHEM 2100, 2110, 2113 or 2130 is possible by following our Technical Informations. Chemically hardened stencils become brittle. They can no longer be reclaimed.

The reclaiming can be done with the usual FOTECHEM decoating products.

Storing time is 2 years.

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