

FOTECOAT 1065

Dual-Cure Photopolymer Emulsion for Textile Screen Printing

1. DESCRIPTION

- Fast, dual-cure photopolymer textile printing screen process emulsion with separate diazo sensitizer powder, for aqueous ink systems.
- Blue colour with excellent see-through
- Very short exposure time
- The ready-made stencil can be post-hardened by UV-light to increase the resistance.

2. APPLICATION ADVANTAGES

- 48% solid content before sensitizing
- High viscosity (adapted for coarse mesh)
- Can be coated wet on wet without intermediate drying down to very coarse mesh.
- Stencils made with **FOTECOAT 1065** can be printed with most inks containing water. Depending on the aqueous ink system the stencil can be post-hardened with UV-light to reach longer runs. Such a post-hardening makes the stencil also more resistant against solvents that could be contained in the aqueous ink.
- Can also be post-hardened with **FOTECHEM 2119** if a permanent stencil for all inks is desired.
- The **FOTECHEM 2119** treatment does not need heat. The stencil can no longer be decoated.

3. COATING TECHNIQUE AND STENCIL BUILD-UP (TROUGH WITH 0.75 MM R)

| Mesh | Coating | Stencil Thickness over mesh |
|-----------|---------|-----------------------------|
| 43/80 PW | 1/2 | 23 µm |
| 43/80 PW | 1/1 | 23 µm |
| 120/34 PW | 1/1 | 6 µm |
| 120/34 PW | 1/2 | 16 µm |

- Because of the high viscosity of **FOTECOAT 1065** it is recommended to degass the emulsion after sensitizing during a few hours.
- A 1/1 coating on coarse meshes is possible. The stencil build-up and hence the sharpness of the printing edge will however decrease.
- **FOTECOAT 1065** is ideal for machine coating. If necessary the emulsion can be diluted with water.

4. STENCIL QUALITY

- Definition and resolution are excellent
- The high solid content guarantees a flat stencil surface combined with excellent mesh bridging.

5. STORING

The freshness of the diazo controls the pot life. Age, transportation and storing conditions influence the quality of the emulsion drastically.

| Condition | Service Life |
|--|--------------|
| Unsensitized, 18-25°C storage | 24 months |
| Sensitized, stored at 20 °C (pot life) | 1-2 weeks |
| Pre-coated screens in total darkness at 20°C | 3 weeks |

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6. EXPOSURE TIMES

5 kW metal halide lamp at 100 cm distance;
photopolymer bulb at 100 hours operating time.

| Coating | Mesh | Time in seconds |
|---------|----------|-----------------|
| 1/2 | 43/80 W | 65 |
| 1/1 | 43/80 W | 50 |
| 1/2 | 43/80 Y | 90 |
| 1/1 | 120/34 W | 30 |
| 1/2 | 120/34 W | 40 |
| 1/1 | 120/34 Y | 50 |
| 1/2 | 120/34 Y | 65 |

Post-Exposure: Once the stencil is washed-out and dried it can be exposed again under the sun, day light, fluorescent tubes or with the exposure lamp in the vacuum frame or outside of the frame.

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**.