

AZOCOL[®] Z 1

Solvent and water resistant Diazo-UV-polymer photoemulsion

AZOCOL Z 1 is used for the production of high-quality, solvent and water resistant stencils. Universally suitable for nearly all applications in screen printing. Ink resistances are hardly affected by high air humidity. Easily decoatable.

SENSITIZING With DIAZO NO. 6

DEGREASING Before coating it is recommended to clean and degrease the screen mesh to achieve reproducible coating results. Ensure proper tension of the screen mesh. Use manual degreasers of the PREGAN range or KIWOCLEAN degreasing concentrates for automatic units (see separate technical information). After thorough rinsing with water and drying the screens are ready for coating.

COATING Coating can be done manually or by machine. The use of a coating machine is especially recommended because it achieves a reproducible coating result. If coating is done manually ensure that the mesh openings are filled from the printing side (generally 2-3). Only then begin with the emulsion build-up from the squeegee side - depending on the print job.

DRYING The screen must be dried thoroughly before exposing to achieve the highest ink resistance. This should preferably be done in a dust-free drying-chamber with fresh-air inlet at temperatures of between 35-40°C.

EXPOSURE The stencil is created by UV-light hardening of the non-printing stencil parts. Expose with blue actinic light at a wave length of 350-400 nm. A metal halide lamp provides the best results.

Due to the many variables that determine the actual exposure time, accurate exposure times cannot be given. Optimum copying results can only be achieved by trials (step exposure). For best resistances, please choose an exposure time which is as long as possible. This maximum exposure time must still allow reproduction of fine details. This is especially important when water based printing inks are used, as the required ink resistance in this case will be achieved by a higher exposure time.

Guide values:

Light source: 5.000 W metal halide lamp at a distance of 1 m. Manual coating (H), e.g. twice from the printing side and three times from the squeegee side [2D/3R(H)] or automatically with a KIWOMAT MODULAR (MA); coating trough R 125:

Mesh	Coating sequence	Stencil build-up thickness	Average exposure time
100 – 40 W	2D/ 2R (H)	8 ± 1 µm	30 – 45 s
100 – 40 W	2D/ 3R(H)	15 ± 1 µm	45 – 60 s
100 – 40 W	1D/1D – 1R(MA)	8 ± 1 µm	30 – 45 s
120 – 34 Y	1D–1R (MA)	6 ± 1 µm	100 - 180
120 – 34 Y	1D/1D–1R/1R (MA)	12 ± 1 µm	120 – 210 s
150 – 31 Y	1D–1R (MA)	4 ± 1 µm	80 – 160 s
150 – 31 Y	1D/1D–1R/1R (MA)	7 ± 1 µm	100 – 180 s

* D = coating from printing side, R = coating from squeegee side
 -: one coating process, /: following coating process

**RETOUCHING/
 BLOCKING-OUT**

For retouching / blocking-out use products of the KIWOFILLER range. When printing with aqueous inks, preferably use water based products which dry water resistant. These can be removed with PREGASOL decoating agents and a high pressure water washer. For further information contact your KIWO distributor or KIWO direct.

DECOATING

In general, stencils made using AZOCOL Z 1 can easily be decoated with PREGASOL products. Use a PREGAN post-cleaner to remove any ink residue or so-called ghost images which may remain on the screen after decoating. Trials are essential as the type of residue may vary. Please make tests and ask for samples.

NOTICE

Please note that the printing resistance of a screen printing stencil is influenced by a lot of parameters e.g. mesh, coating technique, drying, exposure time etc. Furthermore, a lot of printing media and printing machines are being used in practice which have not all been tested by us. Therefore, please accept our offer and test the suitability of our products by asking for emulsion samples, as we can only guarantee a constant quality according to our own working conditions.

COLOUR

Unsensitized: blue / Sensitized: green

VISCOSITY

Approx. 7000 mPas (Rheomat RM 180 according to DIN 53019, D = 100 s⁻¹)

**HEALTH HAZARDS/
 ENVIRONMENTAL
 PROTECTION**

Please follow further information given in the material safety data sheet.

STORAGE

Unsensitized: 1 year (at 20 - 25°C). Protect against freezing.
 Sensitized: approx. 6 weeks (at 20 - 25°C)

Screens coated in advance: approx. 4 weeks (at 20 - 25°C and in complete darkness).

With longer storage of precoated screens the copying material can absorb humidity from the environment. Dry again prior to copying.