

Replaces all previous technical information

KIWOFILM™ Z™

Presensitized, water transferable stencil making film (capillary film). **KIWOFILM™ Z™** is used for the production of high-quality, solvent and water resistant stencils. To satisfy the different requirements in screen printing and mesh types, **KIWOFILM™ Z™** is available in thicknesses of 15, 20, and 25 µm (availability of thicknesses can change). The thickness determines the film type name, i.e. the film with a thickness of 15 µm is called **KIWOFILM™ Z™-15**; the film with a thickness of 25µm, **KIWOFILM™ Z™-25** etc. The film is applied onto the mesh using a wet screen, by preparing the mesh using KIWO DUAL PREP, or transferred with KIWOCOL Poly-Plus S, KIWOCOL Poly-Plus SWR, or KIWOCOL Poly-Plus SRX,.

APPLICATION

Cut **KIWOFILM™ Z™** to the required size or prepare the format required and degrease the screen with KIWO DUAL PREP. If abrading new mesh is necessary, use KIWO ABRADER. See separate Technical Information Sheets for these additional products for more details.

Common application methods:

Method A: Apply KIWO DUAL PREP with a brush or spray bottle and then rinse thoroughly with cold water. A uniform water film which is free from drops is produced. Roll up **KIWOFILM™ Z™** with the emulsion side facing outwards. Place the lead edge of the film at the top of the screen, then slowly roll downwards. TIP: using a plastic tube to roll the capillary film onto will help transfer the film evenly to a wet screen. Remove excessive water on the squeegee side of the screen, preferably with a window squeegee.

Method B: Take a degreased, dry screen and apply only a very fine mist of water using either a spray bottle, or air powered sprayer with water in the canister, to the substrate side of the screen. Do not over wet the screen. Apply the **KIWOFILM™ Z™** emulsion side towards the screen. Using a window squeegee, lightly squeegee over the film. Turn the screen around to the squeegee side and thoroughly mist the film area until the film is completely adhered to the mesh with no dry spots. Finish by lightly squeegeeing off the substrate side followed by the squeegee side of the screen.

Method C: Stencils of highest quality can be produced with **KIWOFILM™ Z™** and a KIWOCOL Poly-Plus emulsion. First sensitize KIWOCOL Poly-Plus emulsion. Place **KIWOFILM™ Z™** with the emulsion side upwards on a flat and clean surface, then put the dry, degreased screen substrate side down onto the film. Pour the sensitized emulsion over the upper edge of the film. With a 60 durameter squeegee distribute emulsion slowly and evenly across the screen mesh making sure to cover the entire film surface. The number of squeegee strokes and the applied pressure determine the resulting coating thickness. Remove surplus emulsion from the screen with a spatula.

DRYING Screens should be dried thoroughly before exposing to achieve the highest printing resistance. A dust-free drying chamber at temperatures between 80°F to 100°F with relative humidity below 50% is recommended. Drying in high relative humidity environments, i.e. above 50%, may cause lower resistance levels to printing inks and mechanical wear. After drying, it is recommended to remove the backing film for further, complete drying.

EXPOSURE The stencil is created by UV-light hardening the emulsion in the non-printing image areas. Expose at a wavelength of 350-420nm. A metal halide lamp provides the best results. Due to the many variables that determine the actual exposure time, it can best be determined through testing using the KIWO ExpoCheck exposure calculator. For best durability, please choose an exposure time that is as long as possible without losing fine details in the image.

***Values for average exposure times listed in seconds using a 5,000 W metal halide lamp at a distance of 40 inches. Exposure units vary considerably and proper testing using an exposure calculator like our KIWO ExpoCheck is the best way to determine optimum, complete exposure.**

| KIWO FILM TM Z TM series type | Yellow Polyester Mesh TPI – thread diameter | Average exposure time* | |
|---|---|------------------------|----------------------|
| | | Water Transfer | Emulsion Transfer |
| Z TM -15 | 380 – 31 Y | 45 s | 110 s |
| | 305 – 34 Y | 50 s | 120 s |
| Z TM -20 | 380 – 31 Y | 50 s | 130 s |
| | 305 – 34 Y | 55 s | 150 s |
| | 260 – 40 Y | 60 s | 170 s |
| Z TM -25 | 260 – 40 Y | 170 s | 325 s |
| | 195 – 55 Y | 185 s | 375 s |

All above values determined using the same working procedures. Values may change depending on your specific working procedures. Testing is required to determine specific values for your application.

**RETOUCHING/
BLOCKING-OUT** For retouching/blocking-out use solvent resistant products like the KIWO BLOCKOUT or KIWO RED BLOCKOUT. See separate Technical Information Sheets for these products for more details.

RECLAMING **KIWO FILMTM ZTM** can easily be reclaimed with KIWO STENCIL REMOVER 1:20 and a high-pressure water washer. When using thicker mesh types it is

recommended to spray out from the squeegee side. So-called ghost, haze images or ink residue which may remain on the screen after reclaiming and can be removed from the screen using haze removing products such as KIWO MEGA CLEAN ACTIVE, KIWO HAZE REMOVER or PREGAN PASTE. For optimum stain removing, activate KIWO HAZE REMOVER and PREGAN PASTE with one of our ink degradents such as KIWO INK WASH, KIWO EXCEL INK WASH or KIWO ULTIMATE INK WASH. These products help boost the ink haze removing ability of the haze removing products mentioned above. See separate Technical Information Sheets for these additional products for more details.

NOTICE Please note that the printing resistance of a screen printing stencil is influenced by various parameters which have not been tested by us. Therefore please accept our offer to test the suitability of **KIWO FILM™ Z™** for your specific application by asking for samples: 1-800-KIWO-USA or www.kiwo.com.

COLOR Unexposed: green
Exposed: blue

**HEALTH HAZARDS/
ENVIRONMENTAL
PROTECTION** Please follow further information given in the Material Safety Data Sheet (MSDS).

STORAGE 12 months (at max. 75°F and in original packaging unit)

Screens coated in advance: approx. 14 days at 70°F and in complete darkness. With longer storage of precoated screens the copying material can absorb humidity from the environment. Therefore, It is advisable to dry again prior to exposing.

**ADDITIONAL
INFORMATION** For additional product information, please visit our web site at www.kiwo.com. All products mentioned in this Technical Information Sheet are available through KIWO Inc. and its distributor network. For further information contact your KIWO distributor, or KIWO direct.

Any information pertaining to this product should be considered confidential and communicated to KIWO, or your KIWO distributor.

Thank you for choosing KIWO.