

KIWOFILM DS

Presensitized, water transferable stencil making film (capillary film). KIWOFILM DS is used for the production of high-quality, solvent resistant stencils. To satisfy the different requirements in screen printing and mesh types, KIWOFILM DS is available in thicknesses of 18, 25, 35, 50 and 70 μm . The thickness determines the film type name, i.e. the film with a thickness of 18 μm is called KIWOFILM DS-18, the film with a thickness of 25 μm KIWOFILM DS-25 etc. The film is transferred onto the mesh with water, by preparing the mesh using KIWO DUAL PREP or KIWOCOL 16 RAPID.

APPLICATION Cut KIWOFILM DS 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 Data 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 DS with the emulsion side outwards. Place the film at the upper end of the screen, then slowly roll downwards. Remove excessive water on the squeegee side of the screen, preferably with a rubber squeegee.

Method B: Stencils of highest quality can be produced with KIWOFILM DS and KIWOCOL 16 RAPID. First sensitize KIWOCOL 16 RAPID. Place KIWOFILM DS with the emulsion side upwards on a flat and clean surface, then put the dry and well degreased screen onto the film and pour the sensitized emulsion over the upper edge of the film. Distribute slowly and evenly with a 60 durameter squeegee. The squeegee strokes and the applied pressure determine the resulting coating thickness. Remove surplus emulsion from the screen with e.g. a spatula.

DRYING The screen must be dried thoroughly before exposing in a dust-free drying chamber at temperature of between 80°F to 100°F to achieve the printing highest resistance. Avoid drying at room temperature, as this causes lower resistance levels depending on the respective ambient air humidity. It is recommended to remove the supporting film after drying for further drying

EXPOSURE The stencil is created by UV-light hardening of the non-printing stencils areas. Expose at a wave length 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 EXPOSURE CALCULATOR or the KIWO STEP WEDGE. 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.

Guide values (5,000 W metal halide lamp at a distance of 40 inches):

KIWO FILM type	PET-mesh (tpi)	Average exposure time		Average coating thickness	
		Water Transfer	Emulsion Transfer	Water Transfer	Emulsion Transfer
DS-18	380 – 31 Y	40 s	100 s	3 – 4 µm	13 – 16 µm
	305 – 34 Y	45 s	110 s	2 – 3µm	
DS-25	380 – 31 Y	45 s	120 s	10 – 14 µm	18 – 22 µm
	305 – 34 Y	50 s	140 s	6 – 10 µm	
	260 – 40 Y	55 s	160 s	3 – 6 µm	
DS-35	260 – 40 Y	160 s	300 s	10 – 16 µm	25 – 30 µm
	195 – 55 Y	180 s	350 s	8 – 14 µm	
DS-50	195 – 55 Y	200 s	400 s	30 - 35µm	37 – 43 µm
	156 – 64 W	120 s	240 s	25 – 30 µm	
	110 – 80 W	140 s	280 s	22 - 28µm	
DS-70	195 – 55 Y	320 s	450 s	55 – 62 µm	57 – 63 µm
	156 – 64 W	200s	350 s	47 – 55 µm	
	110 – 80 W	250 s	450 s	45 – 53 µm	
	83 – 70 Y	450 s	700 s	37 – 45 µm	

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 of the KIWO BLOCKOUT or KIWO RED BLOCKOUT. See separate Technical Data Sheets for these additional products for more details.

RECLAMING	KIWOFILM DS 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 images or ink residue which may remain on the screen after reclaiming and can be removed from the screen using KIWO HAZE REMOVER or PREGAN PASTE. Use the haze removing products with the KIWO INK WASH, KIWO EXCEL INK WASH or KIWO ULTIMATE INK WASH. These products are also very effective at removing ink haze. See separate Technical Data Sheets for these additional products for more details.
NOTICE	Please note that the printing resistance of a screen printing stencil is influenced by various of parameters which have not been tested by us. Therefore please accept our offer to test the suitability of KIWOFILM DS 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. It is therefore advisable dry again prior to copying.
ADDITIONAL INFORMATION	For additional product information, please visit our web site at www.kiwo.com . all products mentioned in this technical data sheet are available through KIWO Inc. and its distributor network. For further information contact your KIWO distributor or KIWO direct.

Thank you for choosing KIWO.