

MK Series Mirakal Tinplate Screen Ink

Code Ref: D480 | D483 | D485 | D486

technical information and application instructions

Product Information

This series is a variation on conventional Mirakal ink specifically designed for printing on acrylic roller coated tinplate. THE 2 SERIES MUST NOT BE INTERMIXED. Whilst the series numbers are presently the same, in the near future a unique series number will be allocated to MIRAKAL TINPLATE INKS.

Application Information

While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. See full disclaimer at end of document.

Mesh	90T or finer mesh is recommended.
Stencil	All direct photo emulsions, photo stencil films and hand cut stencil films that are solvent resistant.
Squeegee	Sharp edge 70-80 durometer polyurethane blades as well as triple durometer blades that produce an even ink deposit.
Coverage	25 – 40 sqm per kilo (90T-120T mesh)
Printing	To improve flow, reduce the ink with 15-20% by weight of D564-S026 – Special Tinplate Reducer. Do not use any other thinners as these can cause print defects like bubbling, craters, pinholes.
Drying	MIRAKAL TINPLATE inks on Roller Coated Tinplate will air-dry in 20-40 minutes or can be heat dried requiring 1-3 minutes @ 80°C. However, on the thicker gauge Cold Rolled substrate, this takes more time to heat-up and we suggest 1 – 3mins at 100 - 120°C as determined by plant trials. Do not stack in piles whilst the print is still hot as heat generation in the pile can re-soften the inks and can cause set-off or blocking.

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Stoving We suggest stoving at 80°C for 2 minutes for Roller Coated Tinplate and 2 minutes at 100°C for thicker Cold Rolled substrate. Do not stove at over 100°C for more than 5 minutes. Whites and light colours will yellow and/or darken. Do not stack in piles whilst the print is still hot as heat retention in the pile can re-soften the inks and can cause set-off or blocking.

Metallic Only metallic silvers are possible, as gold powders are not stable in this system. Imitation golds are possible, consult your local branch with regard to shades.

Clears / Extenders / Additives

Thinner – use only D564-S026 MIRAKAL TINPLATE THINNER to reduce the viscosity. 10-20% can be added, this is a slow thinner and a retarder should not be required – consult your local branch before adding any other solvent.

MIRAKAL Clear may be used to reduce colour strength or as a metallic mixing varnish for silver powder only.

Adhesion Allow the substrate to fully cool before testing.

Cross hatch tape test – use a cross hatch tool or sharp knife to cut through the ink film only. Apply 3M#600 clear tape on cut area, rub down and rip off. Ink should only come off from actual cut areas.

Fingernail scratch test – thoroughly dried ink will resist scratching.

Over-varnish Pre-test carefully with any roller-coat over-varnish as reticulation is very likely to occur.

Clean Up Use N660-S344 Screen Wash for cleaning ink from the screen.

General Guidelines

Ink Handling All personnel mixing and handling inks must wear gloves and eye protection. Clean up spills immediately. If ink does come in contact with skin, wipe off with a clean, dry, absorbent cloth (do not use solvent or thinner). Wash and rinse affected area with soap and water. Consult the MK Mirakal Tinplate SDS for further instructions and warnings.

Storage Store tightly covered at temperatures between 15°C - 32°C. Ink taken from the press should not be returned to the original container. Store separately to avoid contaminating unused ink.

Shelf life of unopened cans is 5 years from date of manufacture. Stir well before use.

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caution

Please proof this ink, reduced to the consistency you wish to adopt, on a sample of the ACTUAL SUBSTRATE you will be printing BEFORE starting a production run.

Give the proof 24 hours to post cure then check for: Abrasion resistance, adhesion, print appearance and correctness of colour. The adequacy of this ink in these properties cannot be fully established on laboratory equipment on a small scale.

Keep away from heat and open flame. Use with adequate ventilation. Avoid prolonged or repeated contact with skin. Avoid prolonged breathing of vapour or spray mist. Keep container closed when not in use.

GL stands behind the quality of this product. GL cannot, however, guarantee the finished results because GL exercises no control over individual operating conditions and production procedures. While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. Users are also responsible for testing to determine that our product will perform as expected during the printed item's entire life cycle from printing, post-print processing, and shipment to end-use. This product has been specially formulated for screen printing, and it has not been tested for application by any other method. Any liability associated with the use of this product is limited to the value of the product purchased from GL.

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Last date amended: 7 February 2023