

Tips & Tricks

Printing with polyester printing plates

The cost effective alternative for commercial printing

In a market that is increasingly shaped by smaller run lengths, ever more color, and rising competition, print orders are imaged overwhelmingly by using CTP systems. More than anything next to paper-based printing foils, polyester printing plates represent an alternative to metal printing plates. Many advantages arise allowing for new markets to be conquered, and which secure long-term success – especially for commercial print shops with small run lengths of up to a maximum of 20,000:

- More flexibility at high quality.
- Lower production costs in comparison to conventional metal platemaking.
- Shorter throughput times and, as a result, higher profitability compared to analogous plate copies.

The production possibilities of polyester printing plates range from one to four-color printing. In the A4 and A3 formats, above all, they ensure efficiency in a printing enterprise.

Greater efficiency when used correctly

Printing plates

- These may be made using conventional image setters, where the chemicals in the developer are appropriately readjusted according to the manufacturer's recommendations.
- Polyester printing plates with a strength of 0.2 mm for screens up to 70 lines/cm are well-suited for most print orders.
- The machine and printing substrate must be correctly adjusted, in order to reduce the strain on the polyester printing plate in the printing press to a minimum.
- During clamping, the plate cylinder must be absolutely oil free.
- An individual "trapping" should be carried out, depending on the given print order. Typically, this lies between 0.08 and 0.1 mm (as with metal plates).
- Polyester printing plates with a rough reverse side allow for secure handling with respect to plate clamping and diagonal setting, as is demonstrated by its use in the Printmaster QM 46.

Printer's inks

- More highly pigmented inks keep the amount of transferred ink at a low level.
- For optimum printing quality, the inks should not be mixed with printing oil or other auxiliary printing agents.

Dampening solution additive

- In mixing the dampening solution, please pay careful attention to the manufacturer's recommended dosage amounts.
- In principle, a pH-value between 5.0 and 5.5 should be preserved.
- In case of printing problems, such as clumping in corners, or scumming, more additives may be mixed in; however, over-dosage must be avoided. For advice on this, ask your printing plate manufacturer or your supplier.



Printing unit

- Regular and careful maintenance of the machine will ensure perfect printing outcomes.
- Never dampen the reverse side of the plate!
- When starting the printing press, dampen a polyester printing plate more than a metal printing plate.
- Mind that the rollers are correctly adjusted, in order to spare the plate surface.
- Mind that a correct rolling ratio is obtained between plate and blanket cylinder, in order to minimize strain on the printing plate.
- Determine the correct packing thickness of the blanket with a lift gauge. Alternatively, reduce the underpacking of the blanket up to the kiss print (weak printout) and add 0.05 mm underpacking.

Dampening system

- In order to maintain optimal freewheeling, pre-dampen the plate for a few seconds in the machine.
- When printing is interrupted, leave the dampening system engaged.
- For the output, dampening the plate prevents gumming up on the dampening form roller. ■