



TECHNICAL GUIDELINES

Prepress / Flexo Postprint

Status of changes 02 / 2024

Foreword

The following specifications and recommendations serve as a guideline and basis for artwork creation for the flexographic direct printing process (postprint) and are adapted to the production machines of STI Corrugated GmbH.

Because of the variable printing parameters in flexographic printing always differ depending on the machine type, number and equipment of the printing units, substrates, printing forms and ink systems, it is not possible to standardise across the industry as is the case in

offset printing. For halftone printing, machine-, substrate- and printform specific parameters are needed to determine print characteristics and colour management in order to create close to production, colour-accurate proofs.

For this reason, colour proofs provided by the customer will always be matched with a colour proof created by the STI Group (if these are not created according to STI Group specifications) in order to ensure reproducibility on the respective printing units.

Notes on process colours, spot colours, opaque colours / finishing / varnishing

Guideline for data preparation/ print realisation of

- Process colours / translucent spot colours
- Opaque colours
- Print finishing

In flexo direct printing, it is essential to adapt the print data to suit production due to the machine design parameters such as register tolerances, the number of printing units available and the technical printing requirements of the artwork.

A „machine-specific“ or „post-print-compliant“ implementation of photorealistic images, technical screens, texts and areas for flexopost printing must be approved in advance by authorised process managers.

The technical feasibility of production in regard to the colours used for printing (translucent/opaque/print sequence) must be checked and fitting specifications communicated to the pre-press department.

Process colours / spot colours:

Photorealistic images and illustrations can generally be applied in the 4 process colours (cyan / magenta / yellow / black) in the same way as in PSO, taking into account the repro specifications in post-print. However, it may be necessary to convert colours / colour tones realized from CMYK into spot colours due to register fluctuations and / or to avoid ink trapping problems.

This may mean that one more colour has to be created or that magenta, for example, is replaced by a special red.

Opaque colors:

With opaque colours, an opaque white is used to lighten the colour instead of a transparent blend. Opaque inks also include all true metallic inks that are produced with bronze or aluminium (gold and silver) finishes. If such colours are used, the printing sequence and reprotechnical realization (e.g.: application of the colours without knock outs / trapping) must be agreed upon with a production manager before the data is created.

Finishing/effect colours:

Just as in sheet-fed offset printing, many variants of print finishing can be realised in the area of varnishing (spot varnishing / matt-gloss effects / iriodine varnish / functional coatings) and the use of effect colours (e.g. fluorescent colours / UV fluorescent colours / thermochromic colours). Here, too, it is important to coordinate the feasibility and realisation with those responsible for production in order to adapt the data accordingly and prepare artworks in line with the process.

Characteristics of the repro structure in consideration to register accuracy

Trapping:

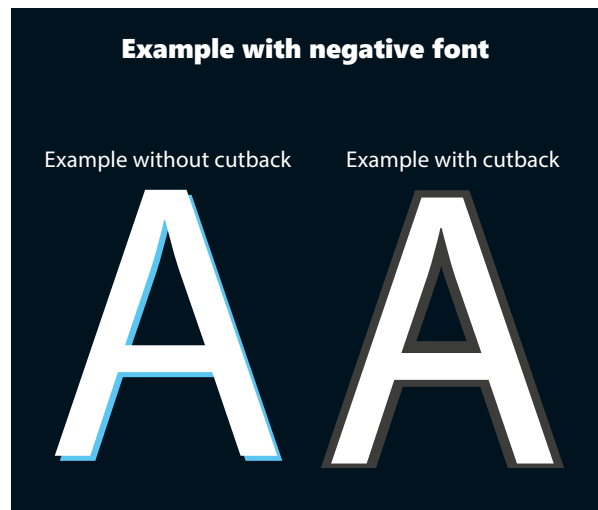
During printing, production-related register fluctuations occur between the printing colours. In order to counteract this (white hairlines), the colours are trapped to each other.

See example on the left (examples are enlarged for visualization)

Cutback:

For negative fonts or elements, the underlying colours is pulled back. This prevents a register offset from standing out visually.

See example on the right (examples are enlarged for visualization)



Line width and text size:

Please make sure that the lines in your layout are not too thin (no „hairlines“). This also applies to fonts.

Positive lines (dark line on light background): min. 0.2 mm

Negative lines (light line on dark background): min. 0.2 mm Minimum font size: 4 point.

The distance between the text and the cut and creasing is at least 5 mm, depending on the material thickness.

Folding boxes that are produced using an inliner require a distance of at least 10 mm.

Example of screen resolution (lines/cm in print)

The screen ruling indicates how many dots occur per length unit. The lower the number of dots, the „coarser“ the printed subject appears. Different screen rulings are used depending on the print subject, the production machine and the substrate.

Screen ruling: 19 lines per cm



Fig. 1

Screen ruling: 65 lines per cm



Fig. 2

For coarser screen widths and fine elements (text, pictograms), it is possible to work with fine outlines for better legibility.

Outline around positive texts for grids up to 42L/cm

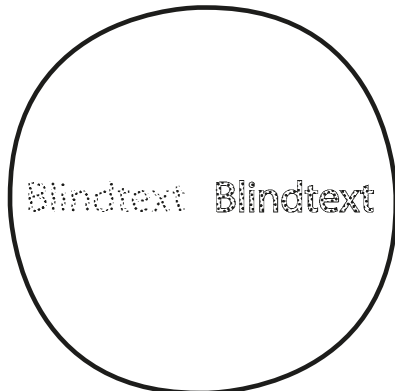


Fig. 3

Outline around negative texts for screens up to 42L/cm

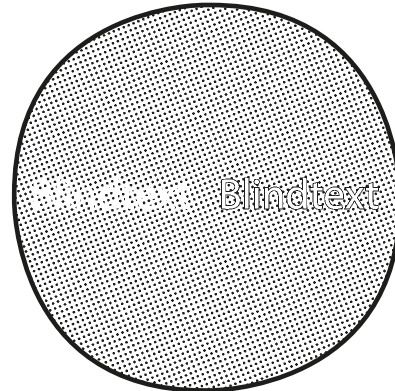


Fig. 4

If you have any questions about the technical guidelines of the STI Group, please contact the Pro Grafik in Lauterbach.

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