

## General print data requirements

### 1 Data transfer

- By E-Mail
- By ZIP-file and E-Mail for larger print data
- Via ftp-server or other electronic platforms

### 2 File format

In general we prefer the PDF (Portable Document Format) file format from Adobe. Please note the corresponding requirements of the individual layout software from which you wish to create the PDF (see point 2.2)

#### 2.1 PDF

General data requirements

- Bleed (3 mm)
- Example ADvanstix:
  - Data format: 82 mm x 82 mm (incl. bleed)
  - Final format: 76,2 mm x 76,2 mm
- Resolution (colour images min. 300 dpi, b/w images min. 200 dpi)
- Font embedding (fully) or converted into curves (see also point 3.6)

Remark: In order to check whether all fonts used are really embedded in the PDF and are not locally loaded from your computer, deactivate: Acrobat > Settings> Page view> Use local fonts!

#### Alternative options to create a PDF file

- a) PDF export method e.g. from InDesign, Illustrator, etc.
  - Export the PDF file from a professional layout program
  - As export settings please select "High-end X3" or "PDF/X-3"
- b) PostScript method from a professional layout program (e.g. InDesign, Illustrator, etc.)
  - Print or export a \*.ps file with the PPD "AdobePDF" (part of the Acrobat Distiller)
  - Convert the .ps file into a PDF with the Acrobat Distiller (setting: "High-end X3" or "PDF/X-3").
- c) PDF via an add-on program  
If possible do not use any freely available software (e.g. PDF-Writer) to create the PDF.

#### 2.2 PDF data requirements in professional layout programs

- a) Adobe Illustrator, Adobe InDesign and Macromedia Freehand

**Check list:**

- Converting the fonts into paths (curves, outlines) is recommended. Otherwise they should be provided completely with the PDF (please mind the license rights of the font supplier when doing so).
- Provide all fonts for printer and screen as "Postscript Type 1".
- All images and graphics used in the layout file must be contained in the PDF.
- Placed illustrations are possible in TIFF or EPS format. 300 dpi for colour images and 200 dpi for b/w images.
- For printing in special colours the correct Pantone colours (PMS) must be created in the colour palette.

b) Adobe Photoshop

**Check list:**

- Please save the Photoshop data in Macintosh TIFF (LZW) or EPS format. This will prevent inadvertent changes or font replacements occurring during processing.
- For a high quality output use the "LZW" lossless compression.
- All layers must be reduced to the background layer.
- All coloured bitmap images should have a resolution of min. 300 dpi.
- All greyscale images should have a resolution of min. 200 dpi.
- All print data should be edited in CMYK. Alternatively, Pantone colours can be used. Please contact us if you have any questions.
- If a special colour is used in an image, then this must be saved as Photoshop DCS 2.0 in order to keep information about the special colour.

**3 Data checking and data requirements**

**3.1 Colours**

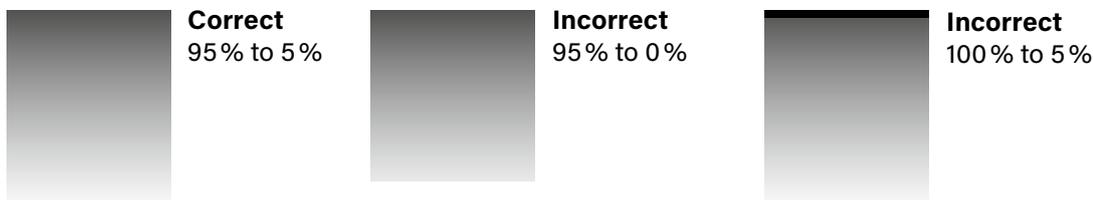
- Front and back sides can be printed with four colours. There might be limitations when additionally using scratch-off areas or for the Membership Card. Please contact us.
- Flexo-print in CMYK or 4C is subject to higher colour fluctuations than in offset printing for example. For this reason large areas of colour should be created in special colours (Pantone). Almost all Pantone colours can be printed.
- We recommend to use photos exclusively on the front side.
- The contrast between text and background should be adequate.  
Remark: The contrast between individual colours will be most clearly visible if you convert the image to a greyscale image.
- Please always work in CMYK mode and not in RGB mode when creating your print files. When converting the files from RGB to CMYK mode undesired colour fluctuations might arise!

### 3.2 Colour composition

We recommend colour chromatic composition or UCR (Under Colour Removal). With this separation black is only used in the deep shades - this results in the colours appearing with a rich tone. The settings in Photoshop are: Maximum Black Ink Limit 96 % and Total Ink Limit 300 %.

### 3.3 Gradient screen

Gradient screens must only be allowed to drop off to max. 5 %. Gradient screens above 95 % can appear as solid colours when printing due to dot gain (see point 3.5).

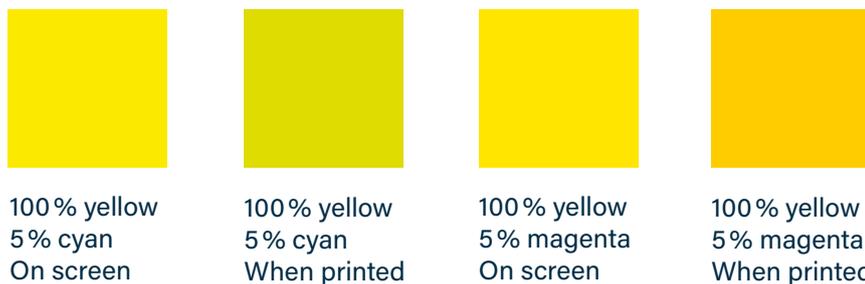


### 3.4 Pixelated graphics

Please use a compression-less image format (e.g. TIFF or EPS) right from the start, creating the PDF without compression and always setting the resolution to at least 300 dpi or "Press quality" (see point 2.1ff.).

### 3.5 Dot gain

The dot gain in the Flexo-print process often leads to undesired results. The two examples below show how a print without any technical correction (RIP, Raster Image Processor) from the printers would look like. An average dot gain of 15 %, would result in 5 % cyan yielding 20 % cyan in the print. A colour application of 100 % yellow would not change as only a max. of 100 % can be printed per colour. The second example shows the deviation when printing with 5 % magenta.



Solution: With RIP the printers create a screen of your data which automatically reduces the gain of all of the colours implemented by 15 % before printing. However, the RIP is not able to compensate for a 10 % screen, for example, that means that 10 % would normally be printed with 25 %, but with the correction of 15 % however less than 0 % would remain. Therefore, in the print there would be nothing to see. Therefore every screen under 20 % will be slowly depleted up by RIP, step-by-step. This ensures that a tonal range under 20 % is at least retained. For this reason a level in the print files precisely defined by you below 20 % cannot be taken into account.

So, please be aware of this technical issue when starting with the design. Only experience with the creation of print masters for the Flexo-print and their results can deliver a usable solution.

### **3.6 Requirements on fonts and line thicknesses**

- Please note that we can only carry out retrospective corrections to your PDF if we also have the font that you used. If you have converted the font into paths (curves, outlines), then there is no further possibility to carry out changes in the text, however in this case smaller layout or colour corrections can be carried out (albeit limited).
- If you do not convert your font in your document to paths, then please ensure that you use a "Postscript Type 1 Font" from the Agfa, Adobe or Bitstream font libraries (see point 2ff.).
- Please never use the bold or italic style palette from your font. The selection of these options might not be correctly reproduced
- All positive text must be 5 points or larger.
- White text (negative or inverted fonts): at least 12 points in four-colour printing in CMYK. Note: In four-colour printing registration inaccuracies must be taken into account. As all four colours are not always printed perfectly on top of each other with each pass, one or more colours could be printed in the excluded area, e.g. white text. Solution: use a black outline for the text.
- Positive lines: ½ pt (0.18 mm) or larger,
- Negative lines: 1 pt (0.36 mm) or larger.

### **3.7 Drop shadows**

**The use of drop shadows can often lead to undesired effects with Flexo-print.**

Despite dot gain (see point 3.5) the shadows in the edge area become increasingly darker and break down completely below 5 % (see point 3.3). In addition shadows on a white background increase the negative effect. For that reason, please use a coloured background if you wish to use drop shadows.