



▶ **REPROSPECIFICATION**
Flexographic printing / Gravure printing

▶ TABLE OF CONTENTS

Topic	Page
IT-Equipment	4
B+K Reproservice	5
PDF-Information	6
Data exchange guidelines	7
Data transfer	8
Output devices	9
Contacts	10

▶ TABLE OF CONTENTS

Specifications	Page
Line thickness	11
Font size	12
Trapping	13
Code (flexographic printing)	14
Code (gravure printing)	15
Code quality	16
Screening	17
Print + Color	18

► IT-EQUIPMENT

Apple Workstations / Mac OS X

Applications

- Esko ArtPro
- Adobe Acrobat
- Adobe Illustrator
- Adobe InDesign
- Adobe Photoshop
- Quark Inc. QuarkXPress

File format

- Native file format (Applications)
- PDF (see page 6)
- Tiff
- Archive (Zip, Rar, etc)

▶ B+K PREPRESS SERVICE

Services

- We use the most modern technologies to deliver your desired result for the selected printing process.
- Based on the current developments in the pressroom, we create an optimal reprotechnical implementation of your data. We guarantee an optimal color separation taking into account all technical details.
- We would be happy to advise you if you have any questions about packaging design and the feasibility of your artwork or other issues related to your packaging data.
- When the repro data is supplied (single unit, ready for reproduction), we provide the optimal printing form for the further process in-house. We provide you or your agency with up-to-date B + K color profiles. We would be happy to coordinate with your agency.
- In this case, please also note the technical information on slides 11 – 19.

► PDF-INFORMATION

PDF as data exchange

To ensure efficient processing of your data, we prefer to receive native file format. (Details next page)

If you want to deliver PDF files, please note the following:

- We can supply you with PDF guidelines for exporting from graphic applications.
- Don't use PDF X3
- Don't use transparency flattening
- You should use PDF 1.5 or higher with layers (PDF X4 or X5 is ok)
- GWG (Ghent Workgroup) 2015 Packaging Specification is ok
- PDF 2.0 is also ok (Please refer to the use in this case.)

▶ DATA EXCHANGE GUIDELINES

Data notes^{*1} and Templates

Please supply native file formats with images and fonts

- Please supply all used fonts (complete font suitcase if possible)
- Images (PS files with layers)
- Images with a resolution of 300 dpi (at 100% scaling); Bitmap files 1200 dpi
- ICC-Profiles: Please refer to the use, otherwise assume ISO coated
- Use unique and distinctive file names
- Please provide a binding PDF-File as a reference for content

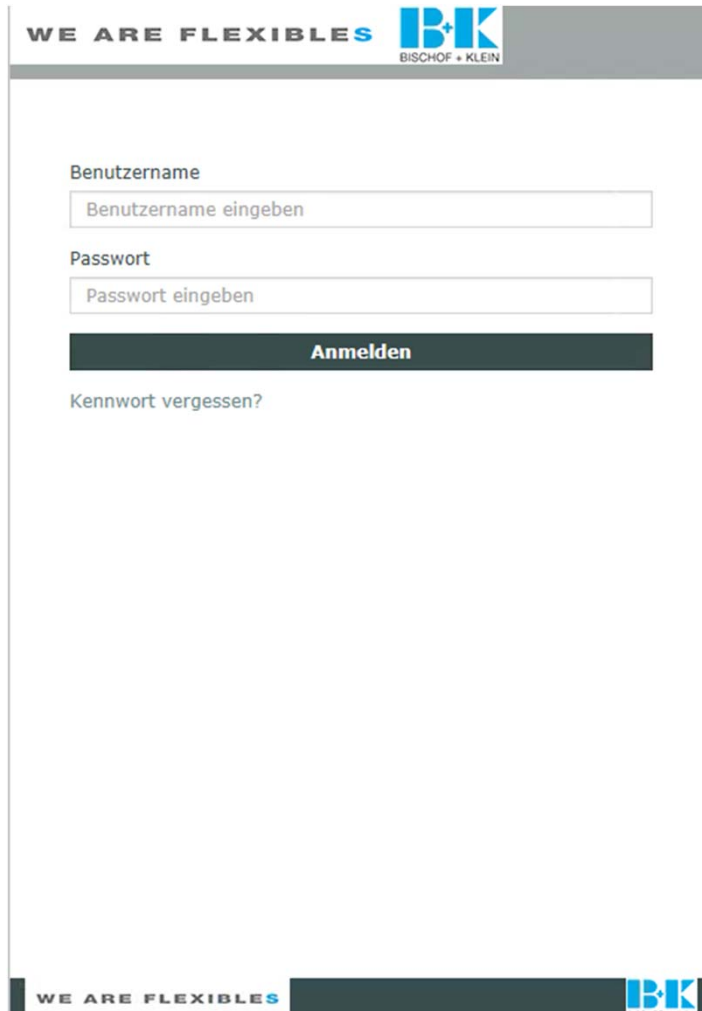
Important: Include binding color samples (such as proof / print samples), if available, with the data.

Important: please mark viewing windows, lacquer or other transparent elements

Important: Please place a filling material simulation on a separate layer and mark this additionally.

^{*1} We are guided by the standards of the [DFTA](#). Files based on the current communication guide can normally be processed without problems.

▶ DATA TRANSFER



The screenshot shows the login interface for Bischof + Klein. At the top left, it says "WE ARE FLEXIBLES" and "B+K BISCHOF + KLEIN". The login form includes a "Benutzername" field with the placeholder "Benutzername eingeben", a "Passwort" field with the placeholder "Passwort eingeben", and a dark "Anmelden" button. Below the button is a link "Kennwort vergessen?". The footer also features "WE ARE FLEXIBLES" and the "B+K BISCHOF + KLEIN" logo.

Internet / mail / data carrier

WebCenter (account on request)

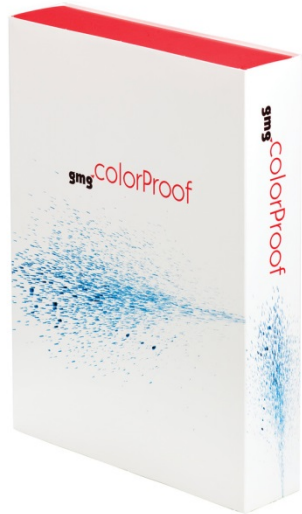
SecureHub (down- and uploadlinks on request)

ftp-Server (account on request)

E-Mail: reprofiles@bk-international.com

Data carrier (CD, DVD, USB-Stick)

▶ OUTPUT DEVICES



Proofing and printing tools

gmg ColorProof / FlexoProof / OpenColor

- Epson SC-P7000V
- gmg ProofPaper premium semimatte 250
- Epson WT7900
- gmg ProofFilm transparent

Esko FullHD-CtP-Belichter (1.270 x 1.700 mm)



► CONTACTS

Technical Contact

Artwork Service flexo printing

Andreas Hojnacki
andreas.hojnacki@bk-international.com
+49-5481-920694

Artwork Service gravure printing

Jürgen Laschtowitz
juergen.laschtowitz@bk-international.com
+49-5481-920505

Repro

Kathrin Drögsler
kathrin.drögsler@bk-international.com
+49-5481-920615

Consulting

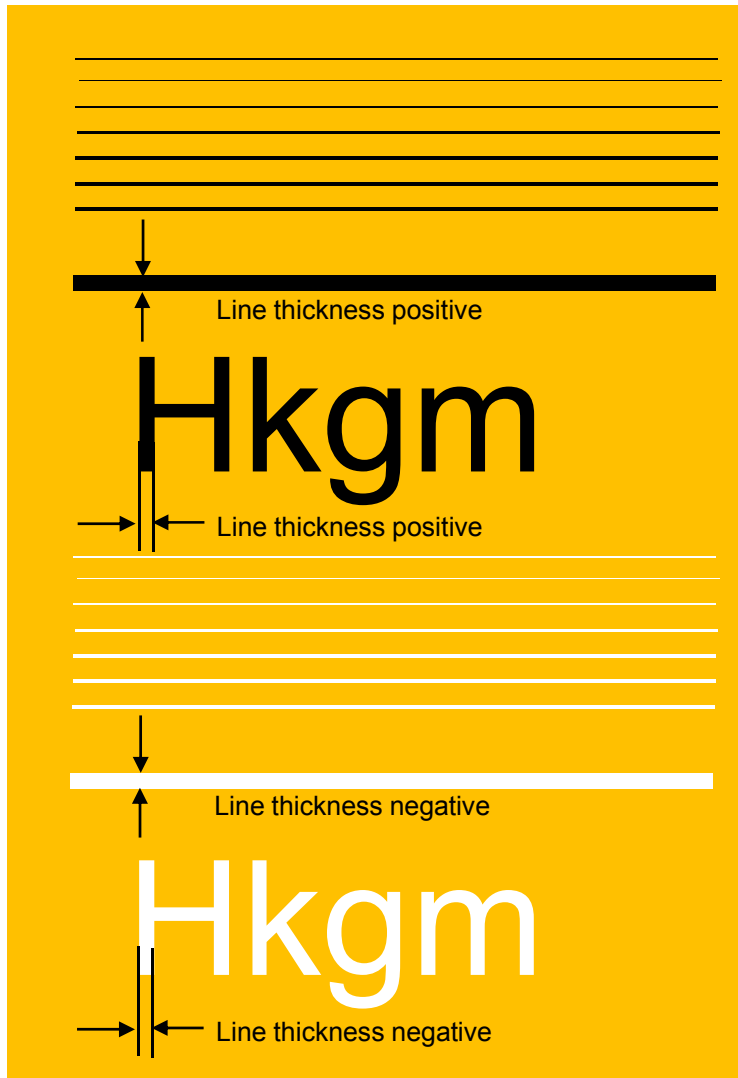
Anja Siemens
anja.siemens@bk-international.com
+49-5481-920408

BISCHOF + KLEIN SE & Co. KG, Rahestraße 47, 49525 Lengerich,

www.bk-international.com

Tel. +49(0) 54 81/ 9 20-0

► SPECIFICATION – LINE THICKNESS



Line thickness (flexographic printing)

Minimum line thickness positive

- $\geq 0,15$ mm offline printing
- $\geq 0,20$ mm inline printing

Minimum line thickness negative

- $\geq 0,20$ mm offline printing
- $\geq 0,30$ mm inline printing

Line thickness (gravure printing)

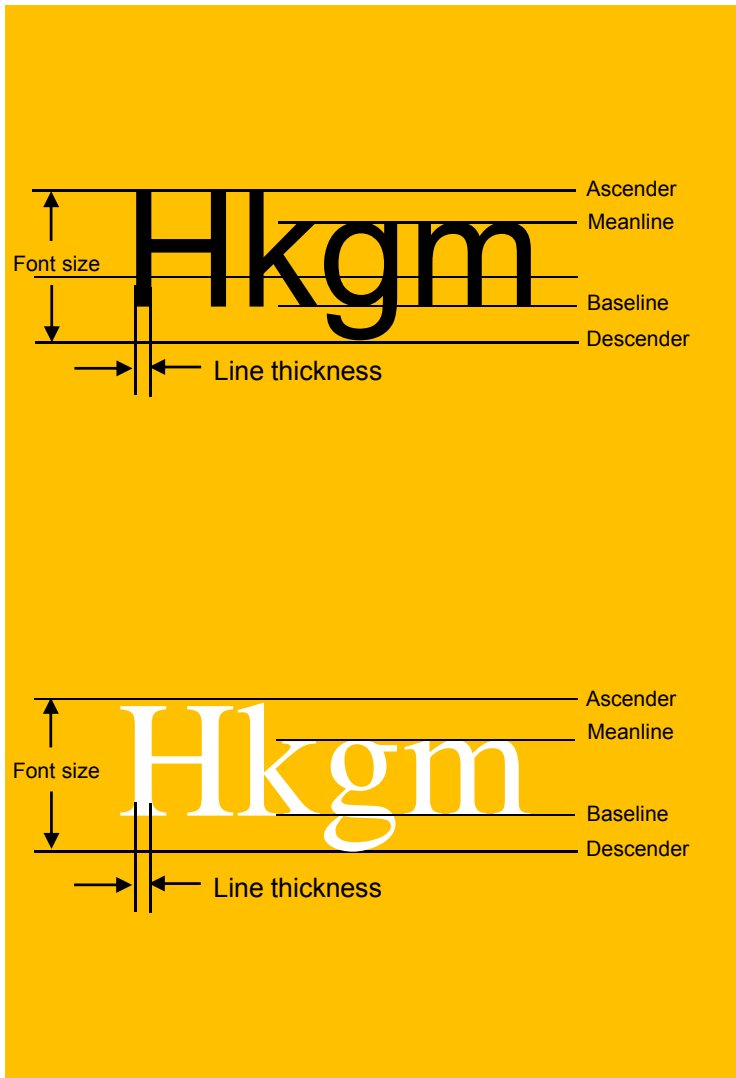
Minimum line thickness positive

- $\geq 0,10$ mm

Minimum line thickness negative

- $\geq 0,15$ mm

► SPECIFICATION – FONT SIZE



Font size

Sans serif font

Positive font

- ≥ 5 pt (1,875 mm) offline printing
- ≥ 8 pt (3,000 mm) inline printing (only flexo)

Negative font

- ≥ 6 pt (2,250 mm) offline printing
- ≥ 10 pt (3,750 mm) inline printing (only flexo))

Serif font

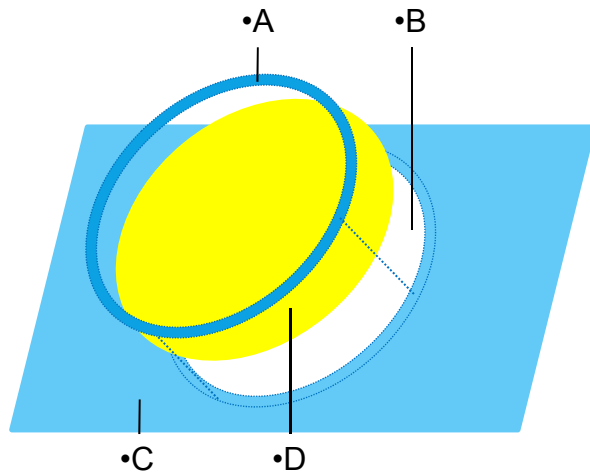
Positive font

- ≥ 6 pt (2,250 mm) offline printing
- ≥ 8 pt (3,000 mm) inline printing (only flexo)

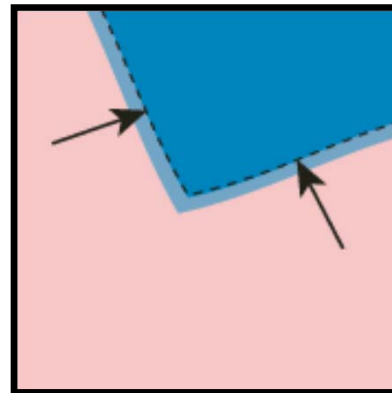
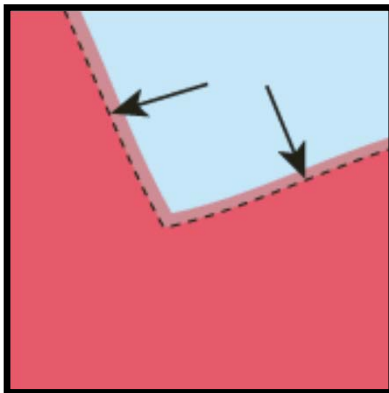
Negative font

- ≥ 7 pt (2,625 mm) offline printing
- ≥ 10 pt (3,750 mm) inline printing (only flexo)

► SPECIFICATION – TRAPPING



- A. Trapping area
- B. Cut out area
- C. Background colour
- D. Foreground colour



Trapping

Trapping linework/ halftone

- 2/10 (0,2 mm) to 3/10 (0,3 mm)
depends on motif

Partial white (smaller as motif)

- 2/10 (0,2 mm) to 3/10 (0,3 mm)
depends on motif

Partial white (larger as motif)

- 2/10 (0,2 mm) to 3/10 (0,3 mm)
depends on motif

► SPECIFICATION – CODE (FLEXOGRAPHIC PRINTING)

Substrate	Size	BWR
PET	SC 1 (90%) Recommendation: SC 3 (110%)	60µm (20 µm Elastomer)
OPA, OPP, PP	SC 2 (100%) Recommendation: SC 3 (110%)	60µm (20 µm Elastomer)
PE	SC 2 (100%) Recommendation: SC 3 (110%)	60µm (20 µm Elastomer)
Paper	SC 2 (100%) Recommendation: SC 3 (110%)	60µm (20 µm Elastomer)

Barcode (EAN-13, ...) + Matrixcode (QR, ...)

No negative barcode

No manipulationen on code elements (bars or number)

No metallic background

No screening behind the code

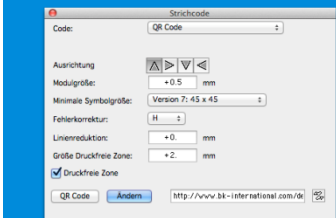
Code build up with single color

Barcode color with contrast to background color

White space expansion 1 mm per side

No positioning across printing direction

Matrixcode module size $\geq 0,5$ mm



If these specifications can not be met, please consult us in advance.

► SPECIFICATION – CODE (GRAVURE PRINTING)

Substrate	Size	BWR
PET / OPP / PE / Paper In printing direction	SC 0 (82%)	30µm
PET / OPP / PE / Paper Across printing direction	SC 1 (90%)	30µm

Barcode (EAN-13, ...) + Matrixcode (QR, ...)

No negative barcode

No manipulationen on code elements (bars or number)

No metallic background

No screening behind the code

Code build up with single color

White space expansion 1 mm per side

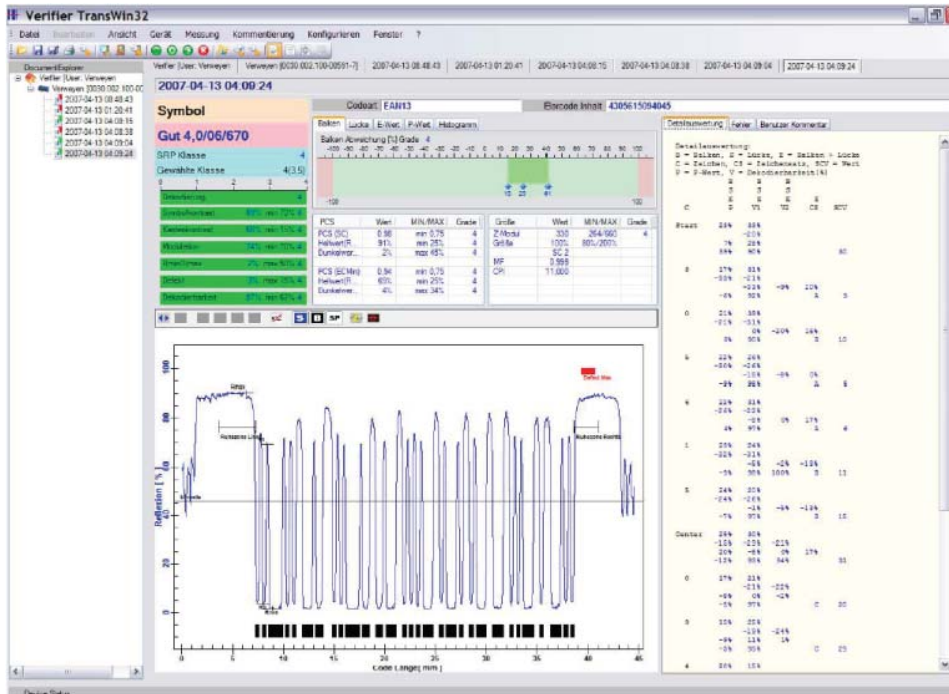
Barcode color with contrast to background color

Matrixcode module size $\geq 0,5$ mm



If these specifications can not be met, please consult us in advance.

► SPECIFICATION – CODE QUALITY (FLEXOGRAPHIC PRINTING)



Requirements for 3B code quality

Barcode

- Minimum size SC3 – 110% (PE Foil transparent SC4 – 120%)
- Code prints in extra colour deck
- Code creation in printing direction
- White space expansion 1 mm per side

Matrixcode / 2D-Code

- Codesize ≥ 15 mm
- Module size $\geq 0,5$ mm
- Comply with rest area (4 Modules printfree)
- Code build up with single color

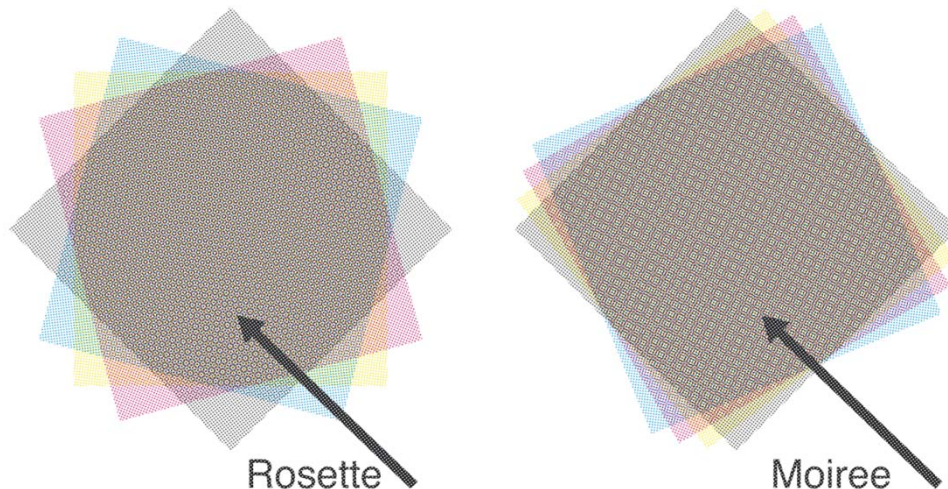
No colored background

If these specifications can not be met, please consult us in advance.

► SPECIFICATION - SCREENING

Printing condition	Flexographic printing	Gravure printing
Colour	Screen angle	Screen angle
Cyan	22,5° / 7,5°	70/0
Magenta	82,5° / 67,5°	70/2
Yellow	7,5° / 82,5°	65/3
Black	52,5° / 37,5°	70/4
Specialcolor	52,5° / 37,5°	70-90/0

(angle depends on motif)



Rosette

Moire

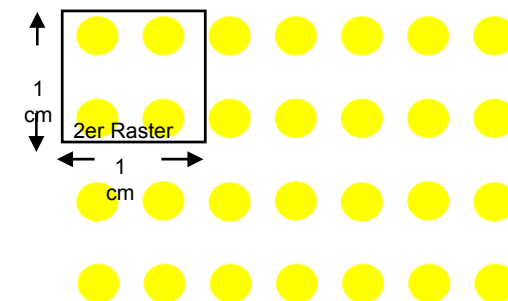
© Bischof + Klein SE & Co.KG / Service Center Prepress / ID-Nr.: 04717996/03

Printing process	Screen ruling
Flexo Standard	45 – 60 lpi (IL)
Flexo Standard	60 – 134 lpi (OL)
Flexo Full HD 60	150 lpi (OL)
Flexo Full HD 70	175 lpi (OL)
Gravure (Engraving)	165 – 225 lpi (OL)
Gravure (Cellaxy)	225 lpi (OL)

OL= Offline Printing

IL= Inline Printing

Screen ruling: Number of dots per inch
(lpi depends on motif and substrate)



WE ARE FLEXIBLES

B+K
BISCHOF + KLEIN

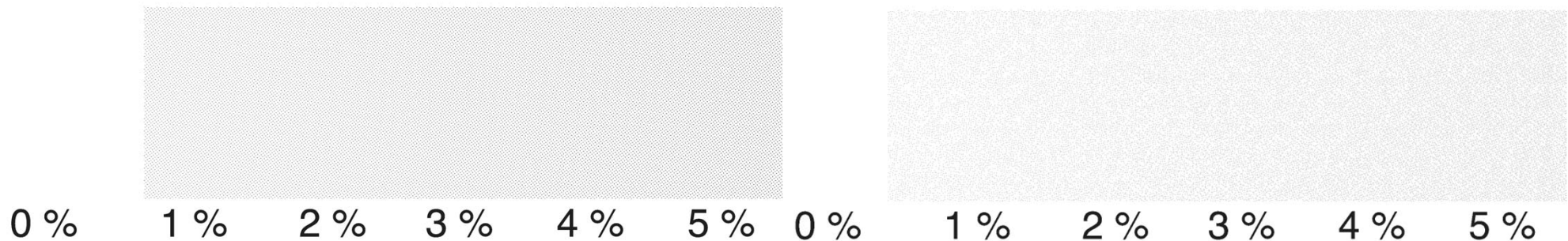
► SPECIFICATION – PRINT AND COLOR

Printing condition	Flexographic printing Standard	Flexographic printing FullHD	Gravure printing
Max. printing width	2030 mm	1470 mm	1400 mm
Max. colour deck (incl. White and Laquer)	10 (up to 1570 mm) 8 (at 1920 mm)	10	10
Max. Ink coverage	280 %	280 %	280 %
Laquer	Matt varnish, Haptic varnish (full-surface and partial)	Matt varnish, Haptic varnish (full-surface and partial)	Matt varnish, Haptic varnish (full-surface and partial)
Profile (printer specific)	on Request	on Request	on Request

Profiles are color consistent for the color space based Cyan, Magenta, Yellow and Black. Specialcolors (Halftone) needs to be printed and measured.

► SPECIFICATION – PRINT AND COLOR

Printing condition	Flexographic printing Standard	Flexographic printing Full HD	Gravure printing
First printable dot - AM (for surface areas)	2 %	5 %	4 %
Vignettes	2 – 98 %	1 – 98 % (FM up to approx. 5% at 175lpi)	0 – 100 %



Flexographic printing Standard 120 lpi

Flexographic printing Full HD 175 lpi

Please use a high-contrast color for eye mark and steering stripe (single color)