

Basic requirements for data delivery

Data type	PostScript level 3
Open data	Subject to consultation
PDF	Distiller, version 5.05 or higher, or comparable quality Please contact us for Distiller settings.
Image formats	EPS, TIFF, JPEG. Macintosh or PC for all formats
Other formats	Subject to consultation
Resolution	Color images, 305 dpi Grayscale images, 305 dpi Bitmaps, 1200 dpi
Document pages	Double page layout with 3 mm bleed. For brochures, disregard cutting edge
Booklet production	Take reduced page size of the inner sections into account for layout. Net format to type area 3 mm. Background is in the bleed area.
Delivered film	Deliver film to be digitized 5 working days before start of imaging or the plotting date.
PostScript pages	Individual pages; portrait. Chronological pagination from p. 0001–000X
Ps_filenames	No diacritics, special characters or spaces. For word delimiting use only the underline character (“_”).
Paper format	Net format plus 20 mm.
Separation	Composite (not separated). If DCS data are included, prepare separate data. Do not process JPEG and DCS in a single file.
Register marks	Centered; length 24 pt; offset 6 pt.
Special colors	For four-color production convert to process colors.
Special formats	E. g., envelopes; inserts; double gate fold, etc. The documents must be laid out in full size as one page (not as double pages).
	Inside pages alternate with outside pages.



Reproduction

1. Offset production

Screen ruling

60 lines/cm. Deviations are allowed for laser screening when technically justified. The standard reference is 60 lines/cm. If screens with higher or lower screen rulings are used, then gradation must also be adjusted, as higher or lower dot gains will occur.

Dot gain/
printing characteristics

Dot gains are measured in the 40% and 80% patches in the control strip. The desired dot gains according to BVD/FOGRA standards for print proofing and production printing are to be maintained.

Paper grade 1

All glossy and semi-matt coated paper from 70 g/m²*

Colors	Full-tone density	80 %	40 %
Black	1.90 – 2.00	14 %	19 %
Cyan	1.50 – 1.60	12 %	16 %
Magenta	1.50 – 1.60	12 %	16 %
Yellow	1.35 – 1.45	12 %	16 %

Paper grade 2

All coated paper from 70 g/m²*

Colors	Full-tone density	80 %	40 %
Black	1.80 – 1.90	16 %	22 %
Cyan	1.45 – 1.55	14 %	19 %
Magenta	1.45 – 1.55	14 %	19 %
Yellow	1.35 – 1.45	14 %	19 %

Paper grade 3

All uncoated paper including pigmented/satin paper

Colors	Full-tone density	80 %	40 %
Black	1.90 – 2.00	18 %	25 %
Cyan	1.50 – 1.60	16 %	22 %
Magenta	1.50 – 1.60	16 %	22 %
Yellow	1.35 – 1.45	16 %	22 %

* Matt-coated paper with a paperweight of 70 g/m² or higher is classified as either grade 1 or grade 2 paper according to its print behavior.

Dot gain tolerances for a press proof are ± 3% in the 40% patch, ± 2% in the 80% patch. Dot gains for colors C, M and Y may differ by a maximum of 4% in the 40% patch.



Color description	The color description is to be copied in directly on the register mark, according to DIN 16549, Part I: B=black C=cyan M=magenta y=Yellow; special colors are written out. Further descriptions (image No., page number, short title) are indicated separately. Writing on the black leader must be at least 5 mm from the lower edge of the image.
Trapping/trim	3 mm
Print marks	Like register marks, corner, folding and cut marks must begin at the correct angle and exactly at a distance of 2 mm from the end format. For delivery of individual images, 5 mm. Print marks may have a maximum line weight of 0.1 mm.
Patches and line elements	Full-tone black areas should have a 40 % cyan undercolor. Negative text must be adequately filled in cyan. If backgrounds contain colored text, then the darker ink is to be applied sharply, the lighter ink over- or under-cut as required.
Under color removal (UCR)	The maximum total area coverage for the four colors should be between 280 % and 310 % in the neutral image areas. Gray component replacement with UCA (under color addition): <ul style="list-style-type: none"> • The maximum total area coverage for the four colors should be between 130 % and 250 % in the neutral image areas, which corresponds to a UCA of 10 % to 50 %.
Film masking	This should always be done on the non-emulsion side of the film.
Fog	Fog max. image density 0.06
Coverage	Offset reproductions must have a minimum black density of 4.0. A density of 4.5 is recommended. Dotted lines and screen dots in the image elements must have sharp edges. Contact prints must be made from etched films or films with screen dots. Screen tone values below 3 % cannot be transferred to the printing plate and are therefore not to be used. Screen dots must have sharp edges to prevent transfer losses.
Scope of delivery	Proofs or press proofs for delivery are to be placed into a bag, page-wise or double page-wise and with layout and reproducible masters. Also required in each case is an uncut proof sheet with all copy and color control strips for copying and printing. Smooth, reverse-reading positives, unbent and without scratches or blemishes, are to be delivered as the end film, placed page-wise or double page-wise into a bag with the imprimatur. All originals or first or second copies are to be delivered in a second bag. Safety negatives or intermediate or copy films are to be sent along as well if specifically requested. All films are to be delivered with perforation (Kodak, if possible).
Archiving	The customer will be given access to data banks if requested.



Position of the reproductions

2. Assembly for the press proof

Positioned as accurately as possible according to impositioning scheme to be provided by westermann druck.

Print control strip

Original control strips are to be used in all colors for copying and printing. These control strips are to be compatible with the BVD/FOGRA standards.

Sheet assembly

3. Plates and copies

Sheet assembly is to be prepared for machine accuracy according to the imposition scheme to be provided by the printers. In the event this is not possible, the reproductions are to be mounted in the direction of travel.

Press proof plates, copy control

Check with FOGRA PMS I or UGRA wedge.

The press proof and printing plate copies must lie within the standard nominal microline range (standard K value range), which depends on the resolution of the plate. Copies are to be kept so that, in the K patch, the positive line elements at ① are lightly visible from step 12 and fully visible from step 15, while those at ② are lightly visible from step 15 and fully visible from step 20. All print plates are to be copies similarly.

Positive plates	①	②
Resolution	up to 8 μm	over 8 μm up to 12 μm
Range	12 – 15 μm	15 – 20 μm

Agreements between the customer and the reproducer to the effect that fine halftone dot areas are to be preserved for subjects such as porcelain or foam are exceptional cases that depart from the standard. Because these reproductions require an increased tonal range, a copy with 8 μm to 10 μm is necessary for print proofing and production printing. In addition, continuously mounted films are required.



4. Press proofs

Press proofs	The colors of the European Color Scale according to DIN 16539 are used for printing.				
Printing substrates	The use of production paper is optimal. If this is not possible, press proofs are printed on similar paper according to the BVD/FOGRA color standards. A precise description of the paper is to be noted on the proof.				
Color sequence	Black, cyan, magenta, yellow				
Inking, measurements	<p>Inking must be kept constant across the page within the tolerances listed in the tables under “Dot gain/characteristic print curve.” The color control elements (Fogra values) consist of a full-tone patch, an 80 % halftone patch, a 40 % halftone patch, a screen ruling of 60 lines, with black, cyan, magenta, yellow, etc., in alternation. Technically justified deviations in halftone patch percentages are noted on the control strip.</p> <p>Inking on the proof is guided by the applicable patterns in the „inking standards“ ring binder and is adjusted visually.</p> <p>For special colors the inking is adjusted so that the solid tones are well covered. Variations in full-tone densities across the sheet must not exceed 8 %.</p>				
Densitometer	The GRETAG D19C is used to determine the values.				
Number of proofs	<p>Six complete proofs, unless another quantity is specified.</p> <p>The proof scale must include single prints and color combinations with control strips as well as any notes concerning special colors. For achromatic colors a combined printing of the three chromatic inks is to be added to the press proof scale.</p>				
Correction marks	Corrections are to be marked on the combined printing according to DIN 16549.				
Adjustment	<p>Originals, press proofs and production runs are to be adjusted under the following light conditions:</p> <table><tr><td>Transparent originals</td><td>D 50</td></tr><tr><td>Reflective originals</td><td>D 65</td></tr></table>	Transparent originals	D 50	Reflective originals	D 65
Transparent originals	D 50				
Reflective originals	D 65				
Analog/digital proofs	Subject to consultation, a proof can be produced in place of a press proof. In the case of an analog proof, the final film must match the surface of the print stock (matt or glossy).				





Requirements

5. Films with multiple-ups

The multiple-ups must all be absolutely the same; i.e., if there are four copies, all four copies must be produced from the original and not consist of one original and three copies.

Information to provide

6. Films delivered by print customers

- a) Page number or position thereof
- b) Color (for polychromatic printing)
- c) Formats
- d) Image number and short description

To be marked

- a) Register marks (as agreed in the case of individual illustrations)
- b) Corner or trim marks (as agreed on the case of individual illustrations)
- c) Center marks for double pages

To be included with delivery

- a) All dimensions
- b) Type area
- c) Imposition pattern or layout pattern

To be delivered

- a) Reverse-reading positive films according to the guidelines of section 1, "Offset reproduction"
- b) or right-reading negative films (by arrangement)
- c) Press proofs, with gauge marks, signed for press

