

1.0 Purpose and validity of these specifications These specifications define the framework for the exchange of data and data carriers with respective customers / suppliers. Adhering to these specifications / recommendations ensures the smooth and error-free exchange of data and data carriers. These specifications are valid for the exchange of data and data carriers with customers / suppliers of the iic packaging AG

Note: Internally distributed copies of this document are subject to a change service by the Digital Prepress Department. Specifications distributed in other places are not subject to the change service (e.g. customer copies).

2.0 Technical support If customers / suppliers have questions concerning the acceptance, processing or return of data / data carriers, they can contact the responsible staff member in Sales or in the Digital Prepress Department:

iic packaging AG  
phone: + 49 (761) 20 85 20  
fax: + 49 (761) 20 85 210  
e-mail: [info@iic-ag.com](mailto:info@iic-ag.com)  
[www.iic-ag.com](http://www.iic-ag.com)

3.0 Data delivery Our data workflow is standardised and processes composite PDF/X-1a, which you can generate yourself by using Postscript und Acrobat Distiller. For each data delivery, please add a completed Checklist for Data Delivery. The exact positioning of the print-ready PDFs is described in the Sample Sheet on Page 7.

### 3.1 Open data

Open data are only accepted by the print shop iic packaging in exceptional cases. When transferring open data, please add a completed Checklist for Data Delivery to let us know which application program and version was used. Open formats generally have to be processed before production. This involves additional production times.

Please make sure that your files are provided with status, sample and colour information. Avoid confusing or too long file names, „umlauts“ or special characters.

- a) This\_way\_is\_right\_4c
- b) This/way.is:wrong!

At iic AG, delivered data are checked to see whether they are appropriate for further processing and whether they correspond to the attached proofs.

3.2 Job information Add a sample of the last version of the design in the original size that is marked as a binding colour sample. It should contain all information, such as programs used (please state version), fonts used, images, eps data, screen settings, if required, and exact information concerning the desired colours (4c, Pantone, HKS). Each file must have a unique file name. Please mark the data carriers and the associated packaging with the company and theme name as well the item number.

The data carriers must also be labelled with the folder name, order name and work date. The print job for a product must fit the trimmed, final format. To ensure that the trimming can be flexibly chosen, the print must bleed by least 2 mm over the final format. The job must be centred in the document.

To minimise the risk of white edges due to production-related tolerances, a trap of 0.04 mm has to be provided.

Barcodes must be created according to the common specifications, e.g. the size of the barcode as well as the white field must be considered. The minimum size of the barcode is SC 0, the reduction is 0.02 mm.

### 3.3 Application programs

- Freehand
- Illustrator
- Art Pro
- InDesign
- Quark XPress
- Photoshop-compatible formats

### 3.4 EPS files

EPS files may cause problems (e.g. generic EPS from QuarkXPress or Freehand). Fonts are not stored with an EPS file. We recommend converting the fonts used into graphs or paths when storing the file. It is essential that the setting “Postscript - deactivate colour management” should be deactivated when saving EPS files from Photoshop.

### 3.5 Image resolution

Please use the following resolutions to ensure good quality and to avoid unnecessary computing time during the processing of the data in RIP:

Colour and grey-level images 405 dpi  
Line images 1200 dpi  
Frequency modulated 25  $\mu$ min. 405 dpi

If available, please add the original Photoshop file with levels. Avoid high magnification in the layout programs. It leads to a loss of quality.

### 3.6 Image storage format

We require the images unrepeated as „TIFF“ or „EPS“ file, 8-bit encoding, no screen angle in 4C, not RGB, loss-free compression (e.g. LZW / ZIP).

Always provide the image data with embedded ICC profiles (see Point 6 „ICC profiles“).

No DCS images, as they cannot be processed in a composite PDF workflow!

### 3.7 Colour space

We prefer CMYK for the colour space for the image data. The appropriate ICC profile has to be embedded in your data set. Please take note of Point 6 “ICC profiles”. The following parameters must be considered when you deliver the images in CMYK:

First printing tone 2%  
Last printing tone 98%  
Max. total colour, paper 330%  
Max. total colour, foil 300%

### 3.8 Image data compression

Only use loss-free compression methods when saving images (e.g. LZW or ZIP)

### 3.9 Colours

When your product has to be printed with special colours, they must be defined accordingly in your document as full tone colours. Alternatively, when printing in process colours (CMYK), set the colour as process colour / four-colour separation. Delete all unused colours from the document. Do not use RGB colours.

### 3.10 Trapping

If trapping is not provided, it is automatically calculated in our workflow. The size of the trap / under-cutting is 0.05 mm

### 3.11 Fonts and lines

Please take note of the following parameters when designing your documents:

Negative lines at least 0.15 mm

Black lines at least 0.10 mm Negative text at least 7 pt (Helvetica)

Black text at least 5 pt (Helvetica)

Hair lines should be avoided.

For all fonts that do not originate in German- or English-speaking countries, we require an additional file in which the fonts are converted to vectors. It can otherwise not be guaranteed that all symbols and characters are represented correctly.

#### Printing text on foil

Due to their material properties, register problems can be expected when printing on foil. Fonts consisting of several colours should be avoided. We therefore recommend the use of special colours for multi-coloured fonts.

### 3.12 Bleed

Elements / images that extend to the edge of the format must exceed the final format by at least 2 mm, i.e. extend into the bleed. These 2 mm are a safety margin for a possible difference in cutting. The distance from the text to the net end-format is 2 mm all around.

### 3.13 Cutting paths

When you work with an EPS with cutting paths, please set the curve approximation to 0.5 pixels, otherwise PostScript errors might occur, which might cause extensive fault searches. 4.0 Bent labels / shrink foils (ArtPro Power Warp)

Labels are bent with the ArtPro software.

The following points must be considered to achieve better quality:

- Use vectors where possible (aliasing)
- Design gradients in the layout program, not in Photoshop (aliasing)
- Grey levels – TIFF and bitmap resolution at least 1000 dpi (aliasing)
- Resolution of the image data 600 dpi (aliasing)
- Add planes used in Photoshop as a PSD file, if applicable

### 5.0 Data carrier

- CD for Mac or PC
- DVD for Mac or PC

Please always format your data carriers for MAC and PC.

Please add a printed table of contents to all your data carriers. When transferring print data and colour proofs (digital proof or press proof), please ensure that they are complete. Use the standard Checklist provided by iic packaging.

### 6.0 ICC - Profile ICC profile source information concerning the way an image file was created is required for colour-true and problem-free processing of image data. Preferably, CMYK data should be provided. If you do not use ISO-ICC profiles to compile your CMYK data, we need additional information concerning the ICC profile used by you. This information states for which print process the data were generated, and allows us to determine whether we should accept the data delivered 1:1 for our print process or whether we have to convert them. Please state the ICC profiles used at the appropriate point in the checklist.

The print shop iic packaging recommends the ISO-ICC profiles, as they were tested in our production. Our standard ISO profiles are available from the print shop iic packaging or at <http://www.eci.org>. In the download area, you will find the ECI\_OFFSET\_2007 with the appropriate profiles.

### 7.0 Digital proofing devices

Print templates can be produced on the following devices:

- Kodak Approval
- Epson 7880

### 7.1 Digital proofs

We require a true-colour proof for coordinating the print production. iic packaging always produces a digital proof to check the data or to have them checked by the customer. The following parameter settings are required to ensure that the print result corresponds to the specifications:

Ugra/FOGRA media wedge V 2.0 The digital proof must contain an Ugra/FOGRA media wedge V 2.0-CMYK (if possible, the AT layout, see figure). The colour deviation between the measured, actual values of the proofed media wedge and the target values of the Ugra/FOGRA must be within the defined tolerance. Information concerning the tolerances, tone value increases and CIE L\*a\*b\* values are provided in the Ugra/FOGRA Excel table (the Excel table is supplied with the media wedge).

<http://www.eci.org> or on request from the iic packaging Digital Prepress Department.

ISO-ICC profile Definition Paper type Total colour application

ISOcoated\_v2\_eci Paper Paper type 1/2 330%

ISOcoated\_2\_300\_eci Foil Foil 300%

#### Specification of production parameters

The footer line of the digital proof must contain the file name, date, rendering intent and the source and target profile used. If no standard ISO-ICC profile was used, information concerning the profile used must be provided (see Point 6 "ICC profiles").

If the specifications above are not adhered to, the print result may deviate from the colour proof.

## 7.2 Release of PDF

PDFs for print release are handed with our web-based Dialogue Softproof. You only need a PC linked to the Internet with a Java application. As soon as a PDF ready for release is available in Dialogue, we automatically send you an e-mail with the access data required.

## 8.0 Print

Tone values, tone value increase during printing (%)

Paper type 1st and 2nd, foil

40% 1 9 – 13 – 17

50% 10 – 14 – 18

70% 10 – 13 – 16

75% 1 9 – 12 – 15

80% 1 8 – 11 – 14

The values shown relate to the tone values for a positive copy, 60/70 grid. The differences in tone values for # may not be greater than 5% (maximum spread). Black is higher by 3% in the middle tone and by 2% in the deep tone. The CIE L\*a\*b\* values for offset print are provided in the following table: Colour values of the primary colours measured on the printing surface

Paper type 1 and 2

L\* / a\* / b\*

Black 16 / 0 / 0

Cyan 55 / -37 / -50

Magenta 48 / 74 / -3

Yellow 89 / -5 / 93

## 9.0 Return of the data

Data that have been processed in the iic packaging print shop can be handed over in the following ways:

- CD / DVD (format as agreed ISO or Mac)
- FTS (access data as agreed)

The data are returned in original form or in the file format of the program in which they have last been processed. The software with which a file is processed, is determined by the iic packaging staff member responsible, if not otherwise agreed upon with the customer. If the customer has special requirements with regard to the data format of the returned files, they must be coordinated with the responsible department in the company. In spite of various protective measures, we cannot be held responsible for damage suffered by the customer due to virus-infected data.