REQUIREMENTS FOR THE ARTWORK
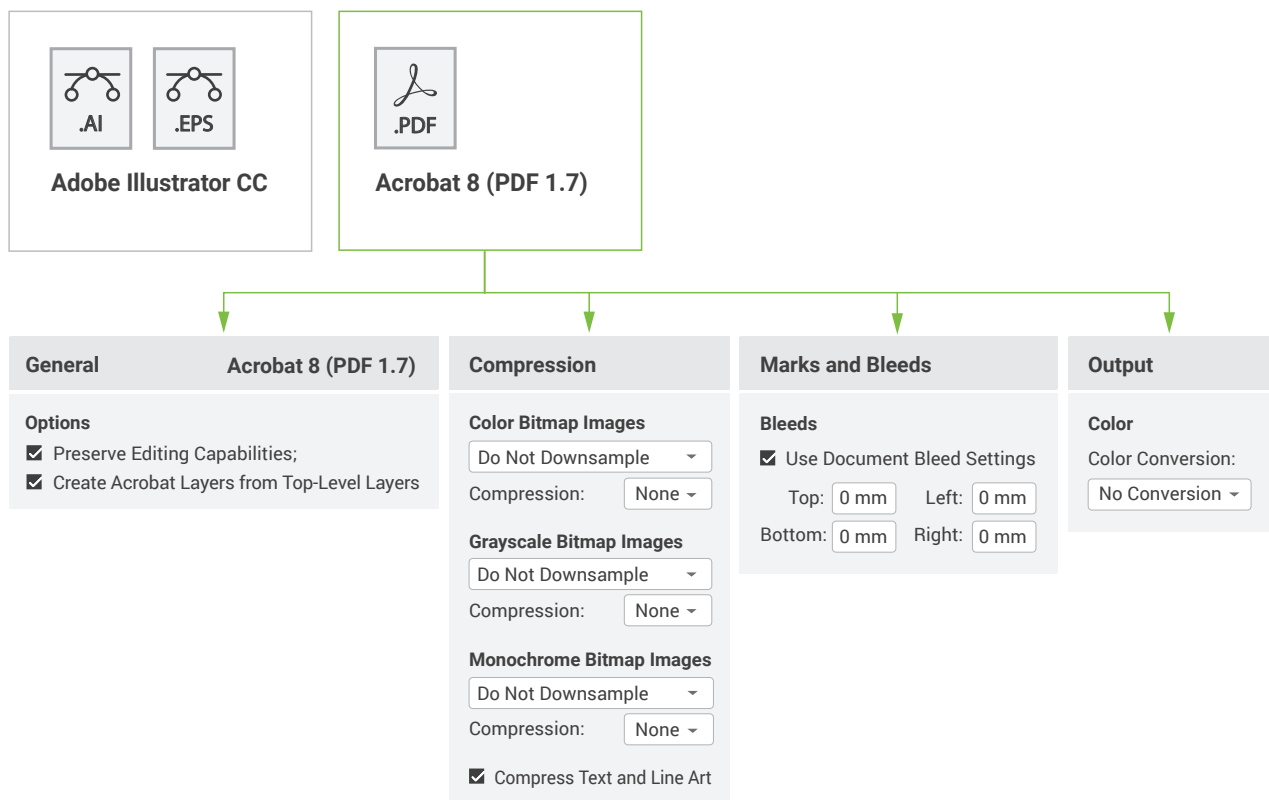TECHNICAL SPECIFICATION/ 2024.11./ 7 v.

The following specification is related to graphic files intended for printing in Polipaks production. Its goal is to fulfill the high standards of flexo-print.
Any deviations from below mentioned requirements must be agreed between customer and Polipaks.

1 FILE FORMATS

.AI **.EPS**
Adobe Illustrator CC

.PDF
Acrobat 8 (PDF 1.7)

General	Acrobat 8 (PDF 1.7)

Options
- ☑ Preserve Editing Capabilities;
- ☑ Create Acrobat Layers from Top-Level Layers

Compression

Color Bitmap Images
Do Not Downsample ▾
Compression: None ▾

Grayscale Bitmap Images
Do Not Downsample ▾
Compression: None ▾

Monochrome Bitmap Images
Do Not Downsample ▾
Compression: None ▾

☑ Compress Text and Line Art

Marks and Bleeds

Bleeds
☑ Use Document Bleed Settings
Top: 0 mm   Left: 0 mm
Bottom: 0 mm   Right: 0 mm

Output

Color
Color Conversion:
No Conversion ▾

2 COLOUR

2.1 Vector and raster graphic files should be provided in the following colour models:

CMYK   **Pantone Matching System**
(Pantone FORMULA GUIDE Coated)   **Greyscale**   **Bitmap**
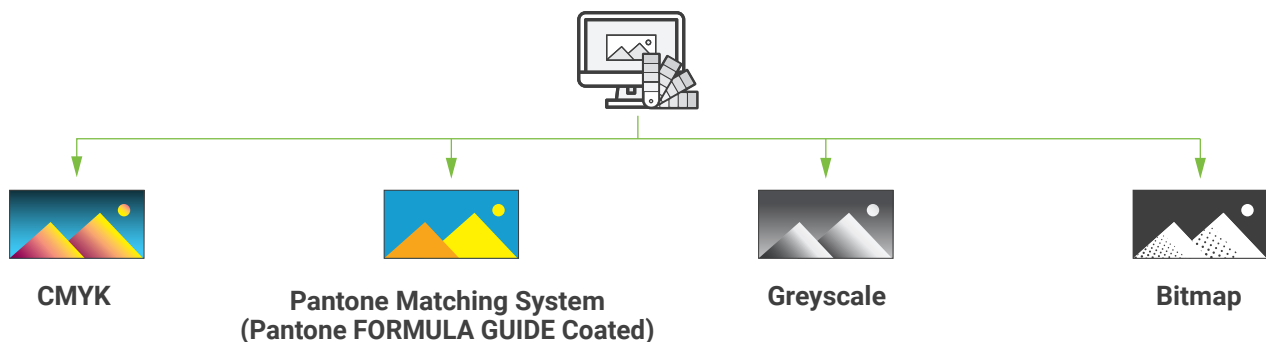
2.2 Print press allows printing up to **10 inks**, including technical coatings (white ink, varnish coating);

2.3 The laminator allows application of different coating in register on already preprinted or clear film (**matt** varnish, **anti-slip** varnish, **antifog** coating etc).

2.4 Total **ink coverage − 320%**;

**2.5** **Gradient fills** must be in tonal range from **3** to **99%**;

2.6 Using the opacities and different blending modes (Screen, Multiply, …) is allowed, except for the use of opacity in the gradient sliders and on Gradient Mesh object (Adobe Illustrator);

2.7 Colour tones **less than 8%** and **above 95%** in printing can be reproduced with some deviations from the original layout. For large areas of light tones, it is recommended to enter **special colours (Pantone)**;

2.8 If the artwork contains **corporate colours**, please provide us with the **Pantone number** according to **"Pantone"** digital catalogue;

2.9 Standard raster slope angles **7,5°**; **37,5°**; **67,5°**; **82,5°**. So, for **"active" colors** the difference between raster slope angles must be **30°**, but for **"non-active"** colors raster slope angle may differ for **15°** (e.g. for yellow color). Overlay of colors that have equal raster slope angle and different lineatures (LPI) is unacceptable;

2.10 For **ink control** on printing, it is required to add **control scales** on artwork (round or square elements, which size is about 5 mm). Two elements for each color (100% and 50%):
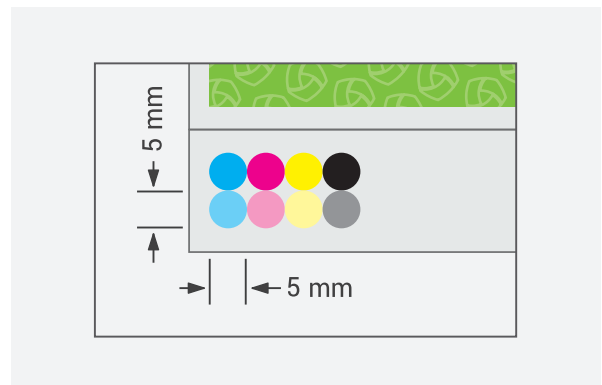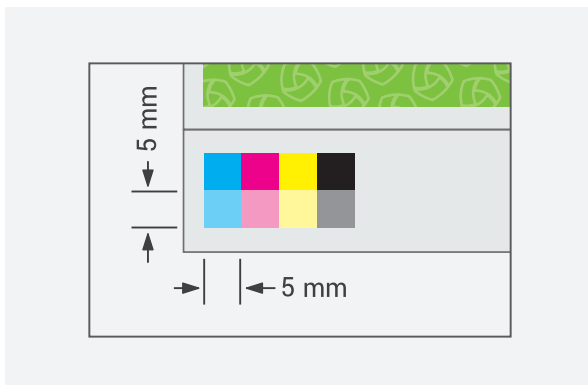
2.11 We will pay attention to the colour profile if it's part of artwork file. For all other cases **ISOcoated_v2_eci** will be the main profile which based on the data specification **FOGRA39** and meet the **ISO 12647-2:2004** standard requirements.

3 EAN-13 BARCODE

3.1 Minimum EAN-13 barcode size is: **SC0** for **print machine direction** and **SC2** for **print cross-direction**;

3.2 EAN-13 barcode must be implemented in **1** ink. **Contrast** strongly influences readability (we recommend to use black ink on white background).

3.3 BWR: 0.04 mm.

3.4 Verification is possible for barcodes **up to 66 mm** wide, including Quiet Zones:

3.5 If there are requirements for the barcode reading class, both the left and right Quiet Zones must be increased by at least **2 mm**:

4 TEXT

4.1 Minimum font size

Example		Font	Number of Inks	Font Size
positive	**Example**	Sans-serif, boldface	Single ink	5 pt
	Example	Serif, decorative and thin face	Single ink	9 pt
	Example	Sans-serif, boldface	2-4 inks	7 pt
	Example	Serif, decorative and thin face	2-4 inks	11 pt
negative	Example	Sans-serif, boldface	Single ink	7 pt
	Example	Serif, decorative and thin face	Single ink	10 pt
	Example	Sans-serif, boldface	2-4 inks	12 pt
	Example	Serif, decorative and thin face	2-4 inks	14 pt

4.2 Letter spacing

The spacing between characters must be **at least 0.7 pt (0.247 mm)**. Reducing the standard letter spacing of the font is not recommended.

at least **0.7 pt (0.247 mm)**

Abc
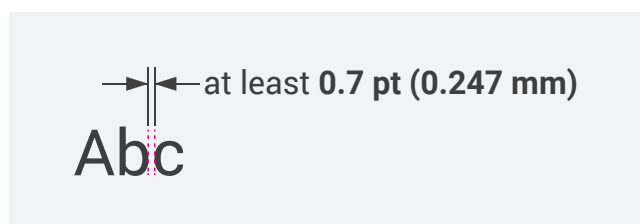
4.3 For successful text adaptation to print the following files are required:

- ▸ a design file with converted text to **Outlines** (including text in **Smart Layers** of Photoshop);
- ▸ a design file with an **active** text;
- ▸ a package of the fonts used in the design.

5 LINES

5.1 Minimum line width

Example		Number of Inks	Line width
positive		Single ink	0.1 mm
		2-4 inks	0.4 mm
negative		Single ink	0.3 mm
		2-4 inks	0.6 mm

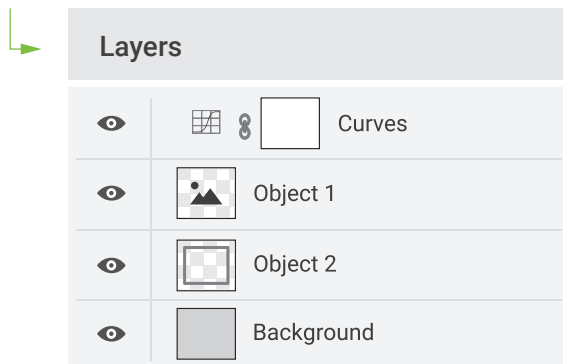**5.2** Lines with the "**Hairline**" attribute **cannot be used**;

6 IMAGES

6.1 Rotating, **scaling** and **cropping** of images must be performed in **Adobe Photoshop**;
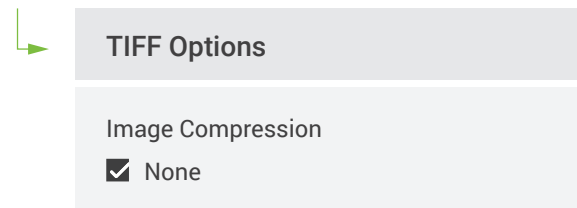
6.2 If the artwork contains **raster images**, they should be attached **separately**:

PSD files - with layers

TIFF files - without compression

Layers
👁 Curves
👁 Object 1
👁 Object 2
👁 Background

TIFF Options
Image Compression
☑ None

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7 RESOLUTION

7.1 Resolution for **raster images** is **300 dpi**;

7.2 Resolution for **effects** created in Adobe Illustrator is **600 dpi**;

7.3 Resolution of **line images** (Bitmap) must be between **600** and **1200 dpi**;

8 COMPLEX OBJECTS

Complex objects in design should be simplified:

Brushes

Flatten Transparency

Raster/Vector Balance 100 %
Gradient and Mesh Resolution 300 ppi
Line Art and Text Resolution 150 ppi

☑ Convert all Strokes to Outlines
☑ Preserve Overprints and Spot Colours

Appearances

Expand Appearance

9 MARGINS & BLEEDS

9.1 Margin
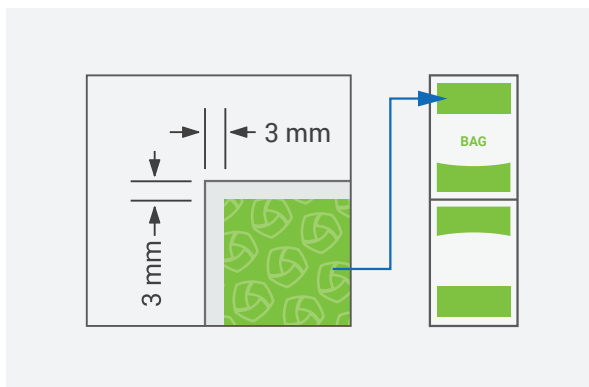
For the "bread packaging"-type products, all printed elements must be placed with the **margin** of not less than **3 mm** from the edges of the bag;

9.2 Bleed
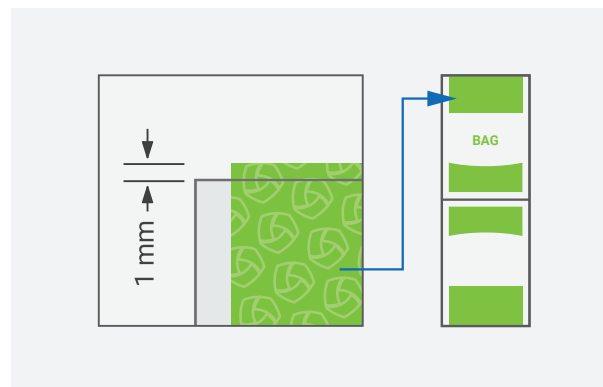
All printed elements, which are printed up to the edges of the product must have **bleed** of **1 mm**;

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10 TRAPPING

Trapping - **0.15 mm***

It should be considered, that "trapping" **changes the visual perception of design**, especially when using contrasting colours and small objects:

Object in layout

Printed result
without trapping

Printed result
with trapping
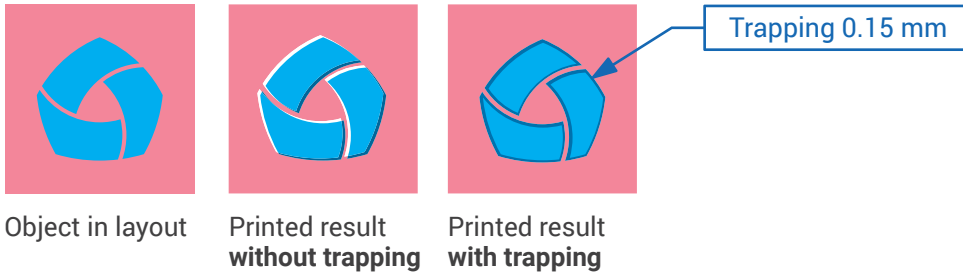
Trapping 0.15 mm

*If the **Step & Repeat** file height is greater than 700 mm, **0.2 mm** trapping is applied:

A

B

≥ 700 mm

1Up

≥ 700 mm

1Up

1Up
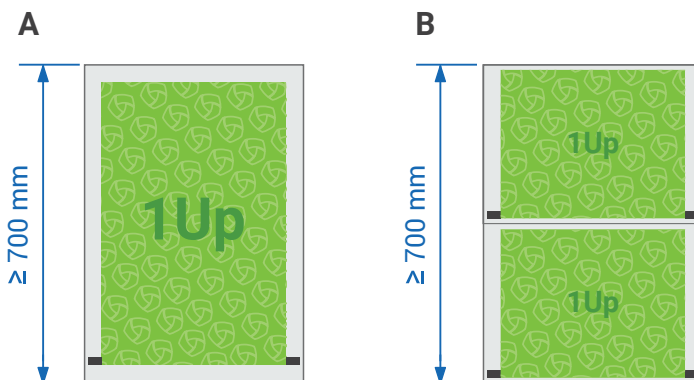
11 PULLBACK FOR WHITE INK

For art elements: **0.15 mm**:

White

0.15 mm

For photo tags: **0.3 mm**:

White

0.3 mm

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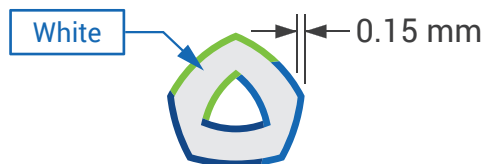
12 VARNISH COATING

12.1 Minimum object sizes**:**

	Example	Object	Matt Varnish	Paper Touch Varnish
positive	———	Minimum **line width**	0.4 mm	0.6 mm
positive	Example	Minimum **font size** - sans-serif, boldface	12 pt	14 pt
negative	———	Minimum **line width**	0.6 mm	0.8 mm
negative	Example	Minimum **font size** - sans-serif, boldface	14 pt	16 pt

12.2 If the varnish is applied in **one** run (at the same time with other inks) - the varnish is applied **1:1**;

12.3 Varnish coating is applied in a **separate** (additional) run:

a) **Fragmentary** Varnish coating:
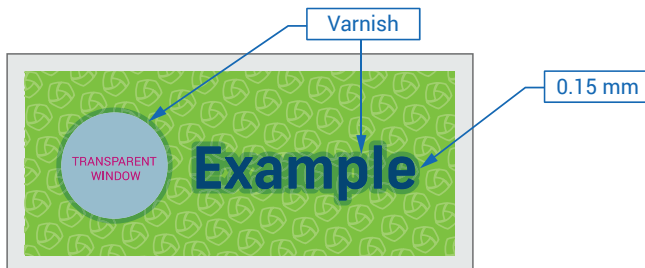
b) Varnish coating on the **background**:

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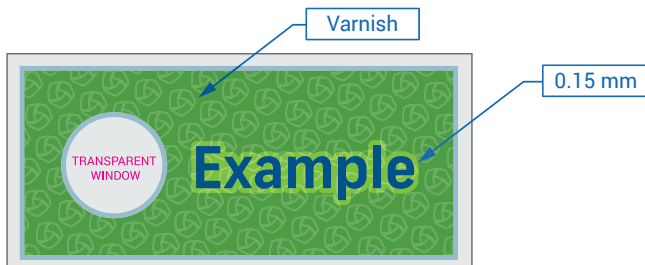
13 PLACEMENT OF DESIGN OBJECTS BY LAYERS

13.1 It is recommended to **delete all unused colours, brushes and styles**;

13.2 Artwork must not contain hidden or non-printable elements;

13.3 The following information must be on separate layers:

	Layers
👁	Technical information
👁	Varnish
👁	White
👁	Colour control charts
👁	Design