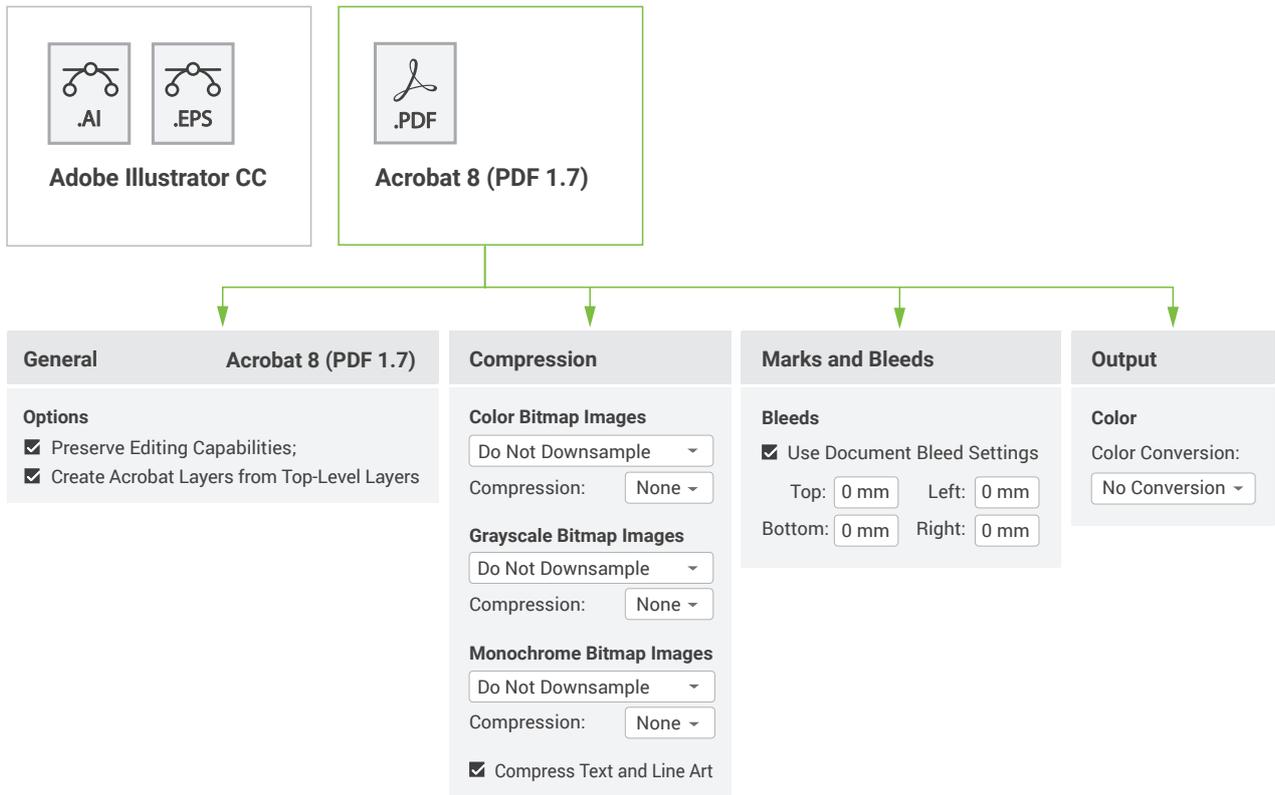


The following specification is related to graphic files intended for printing in Polipaks production. Its goal is to fulfill the high standards of flexo-print.

Any deviations from below mentioned requirements must be agreed between customer and Polipaks.

1 FILE FORMATS



2 COLOUR

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



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%**;

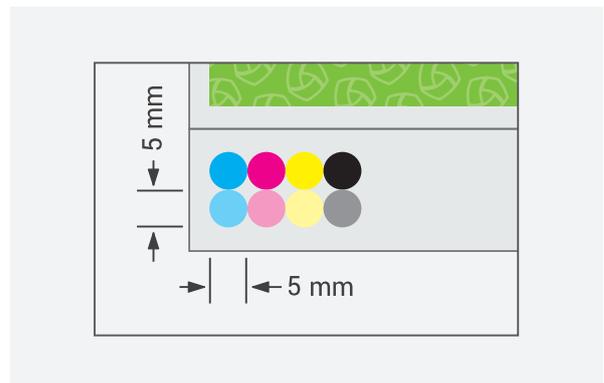
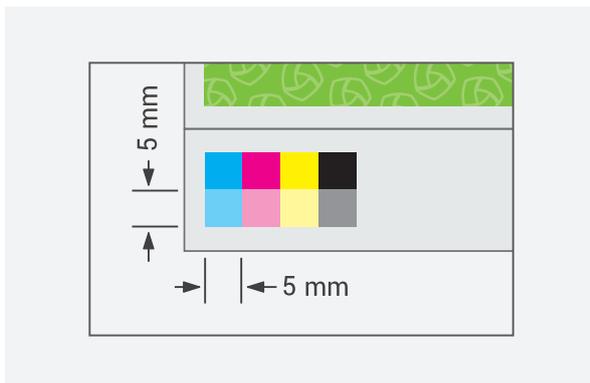
2.6 Using the opacities and different blending modes (Screen, Multiply, ...) is allowed, except for the use of opacity in the gradient sliders and on Gradient Mesh object (Adobe Illustrator);

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 CODE

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



3.2 Contrast strongly influences readability (we recommend to use black ink on white background);

3.3 BWR: 0.04 mm.

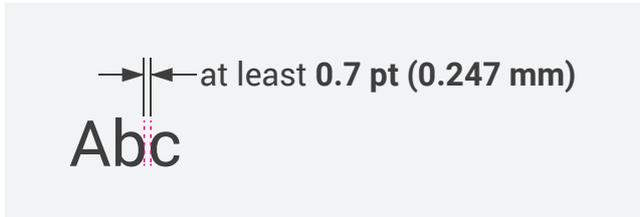
4 TEXT

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.



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**;

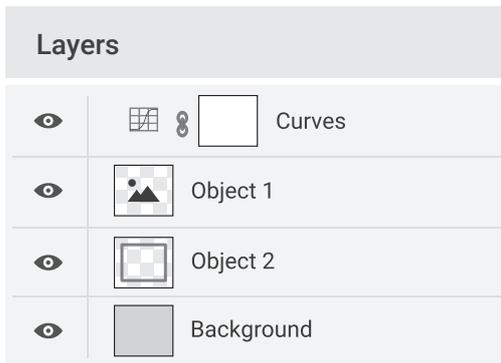
6 IMAGES

6.1 Rotating, scaling and cropping of images must be performed in **Adobe Photoshop**;

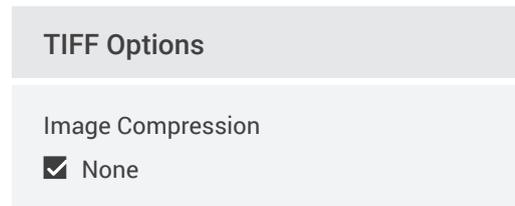
6.2 If the artwork contains **raster images**, they should be attached **separately**:



PSD files - with layers



TIFF files - without compression



7 RESOLUTION

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

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

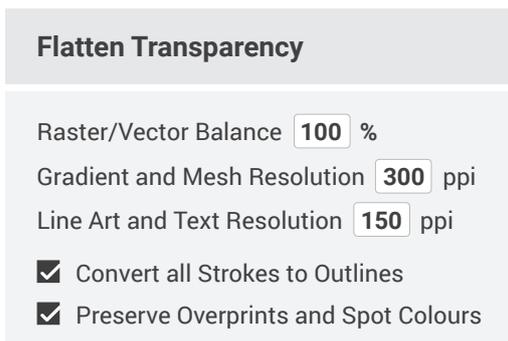
7.3 Resolution of **line images** (Bitmap) must be between **600** and **1200 dpi**;

8 COMPLEX OBJECTS

Complex objects in design should be simplified:



Brushes

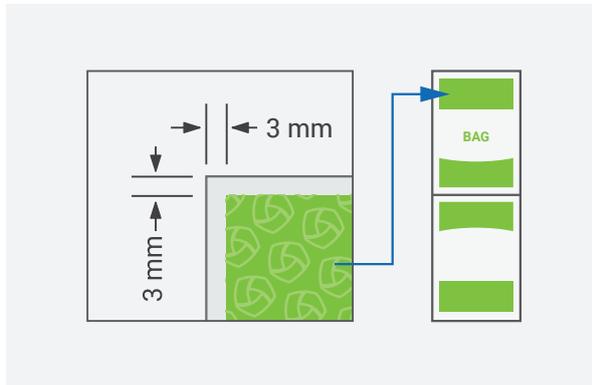


Appearances



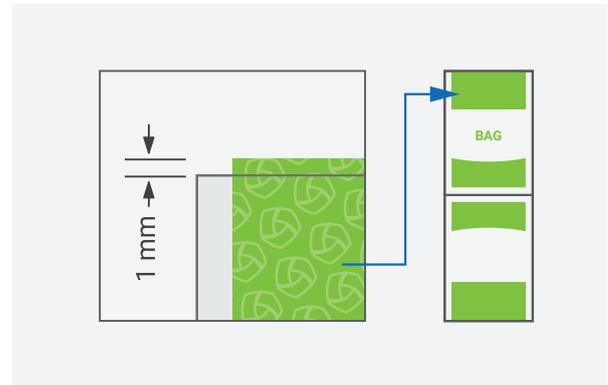
9 MARGINS & BLEEDS

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

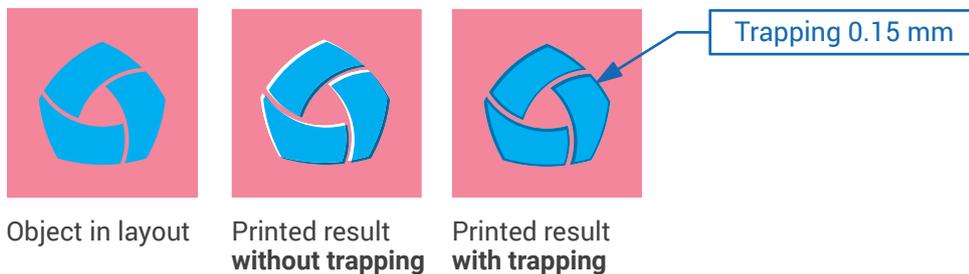


All printed elements, which are printed up to the edges of the product must have **bleed** of **1 mm**;

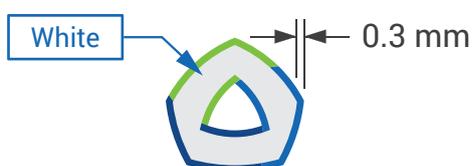
10 TRAPPING & PULLBACK

10.1 Trapping - 0.15 mm;

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

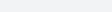


10.2 Pullback for white ink is 0.3 mm;



11 VARNISH COATING

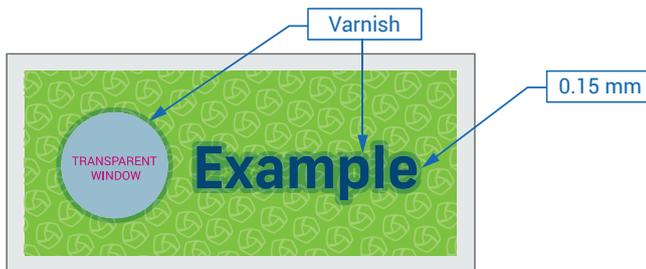
11.1 Minimum object sizes:

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

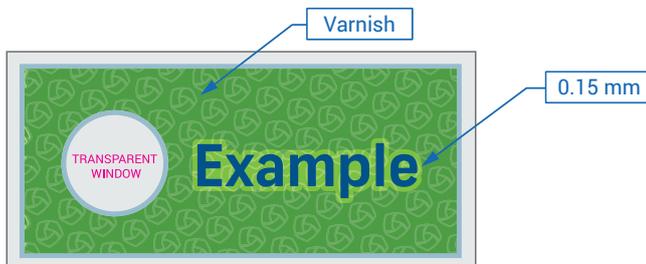
11.2 The varnish is applied in **one** run (at the same time with other inks) - the varnish is applied **1:1**;

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

a) **Fragmentary Varnish coating:**



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



12 PLACEMENT OF DESIGN OBJECTS BY LAYERS

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

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

12.3 The following information must be on separate layers:



↓

Layers	
	 Technical information
	 Varnish
	 White
	 Colour control charts
	 Design