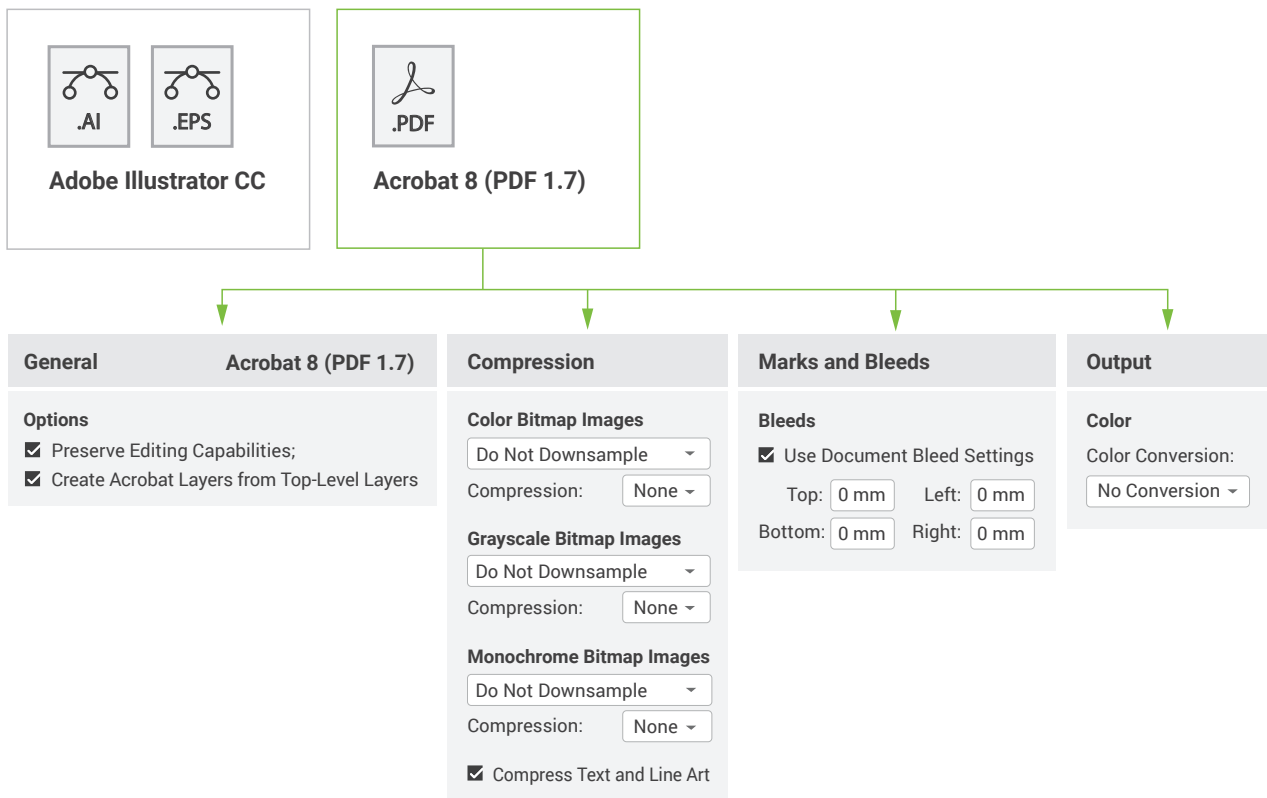


The following specification is related to graphic files intended for printing in Polipaks production. Its goal is to fulfill the high standards of flexo-print.

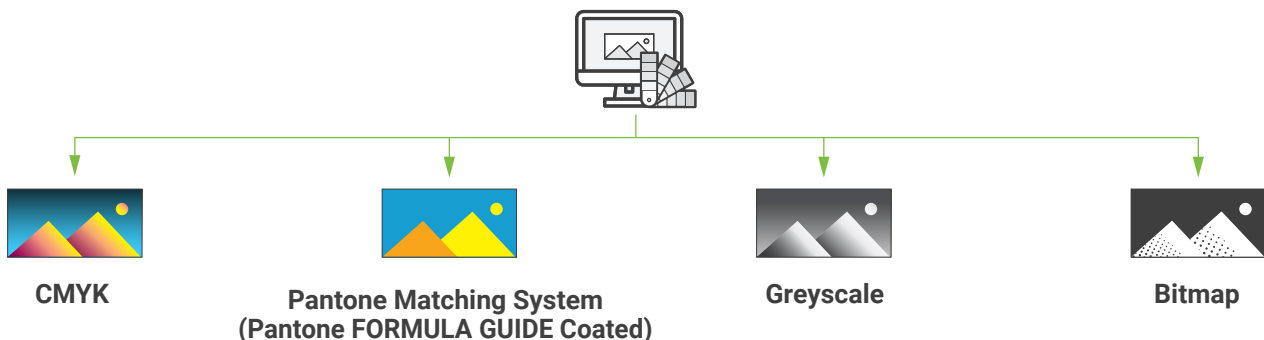
Any deviations from below mentioned requirements must be agreed between customer and Polipaks.

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%**;

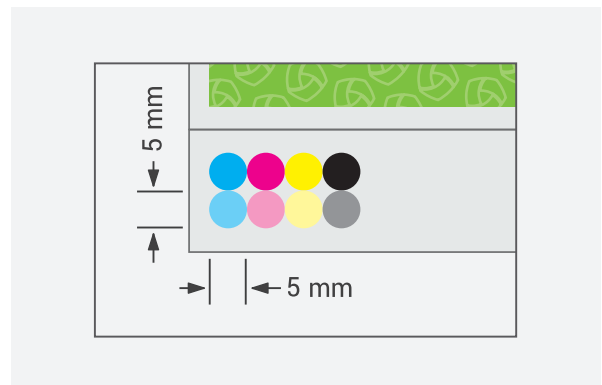
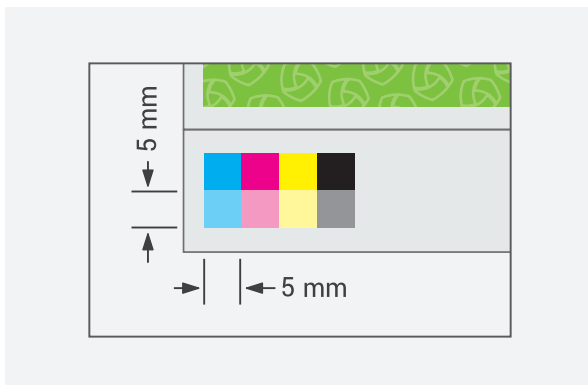
2.6 Using the opacities and different blending modes (Screen, Multiply, ...) is allowed, except for the use of opacity in the gradient sliders and on Gradient Mesh object (Adobe Illustrator);

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 Minimal 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

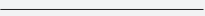



4.2 All fonts must be converted to **Outlines**, including fonts in **Smart Layers** of Photoshop;

RECOMMENDATION

In case of changes in the text, it is advisable to send us the fonts used in the layout. This will **speed up the adaptation of the design** to print.

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**;

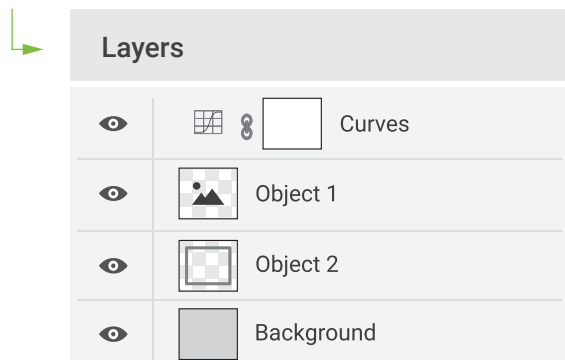
6 IMAGES

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

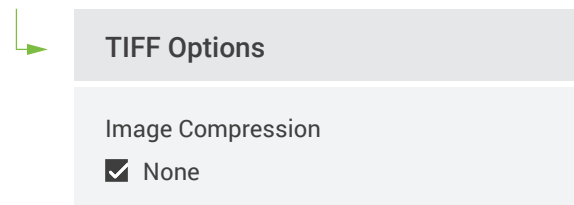
6.2 If the artwork contains **raster images**, they should be attached **separately**:



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

Flatten Transparency

Raster/Vector Balance %

Gradient and Mesh Resolution ppi

Line Art and Text Resolution ppi

Convert all Strokes to Outlines

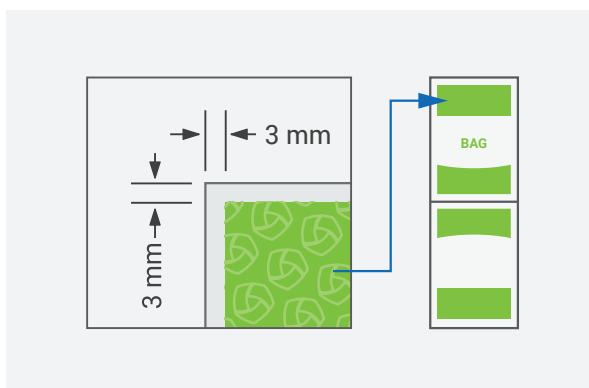
Preserve Overprints and Spot Colours

Appearances

Expand Appearance

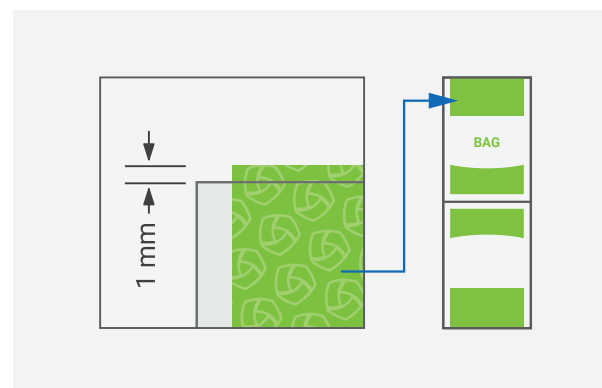
9 MARGINS & BLEEDS

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

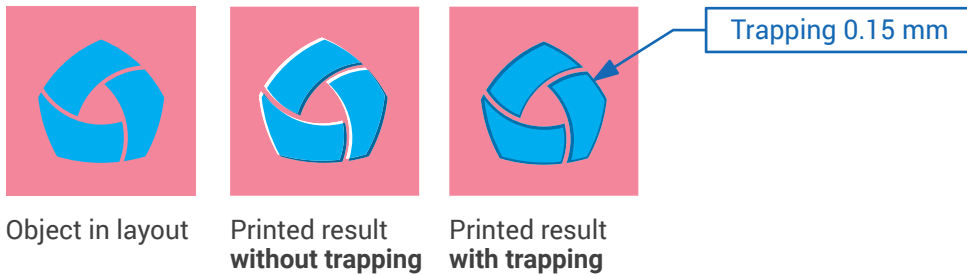


All printed elements, which are printed up to the edges of the product must have **bleed** of **1 mm**;

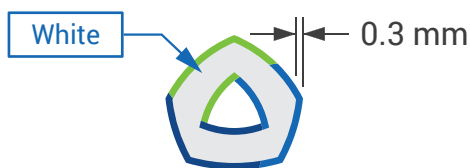
10 TRAPPING & PULLBACK

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

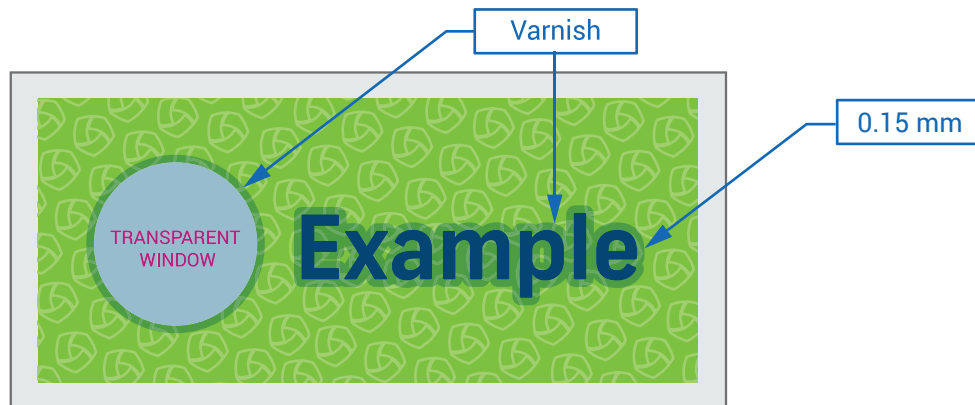
11.1 Minimum object sizes:

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

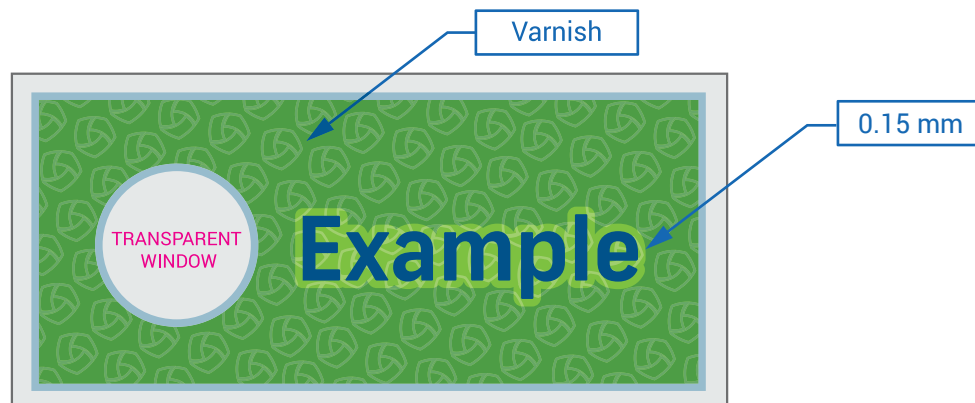
11.2 The varnish is applied in **one** run (at the same time with other inks) - the varnish is applied **1:1**;

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

a) **Fragmentary** Varnish coating:



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



12 CLEAR FILE

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

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