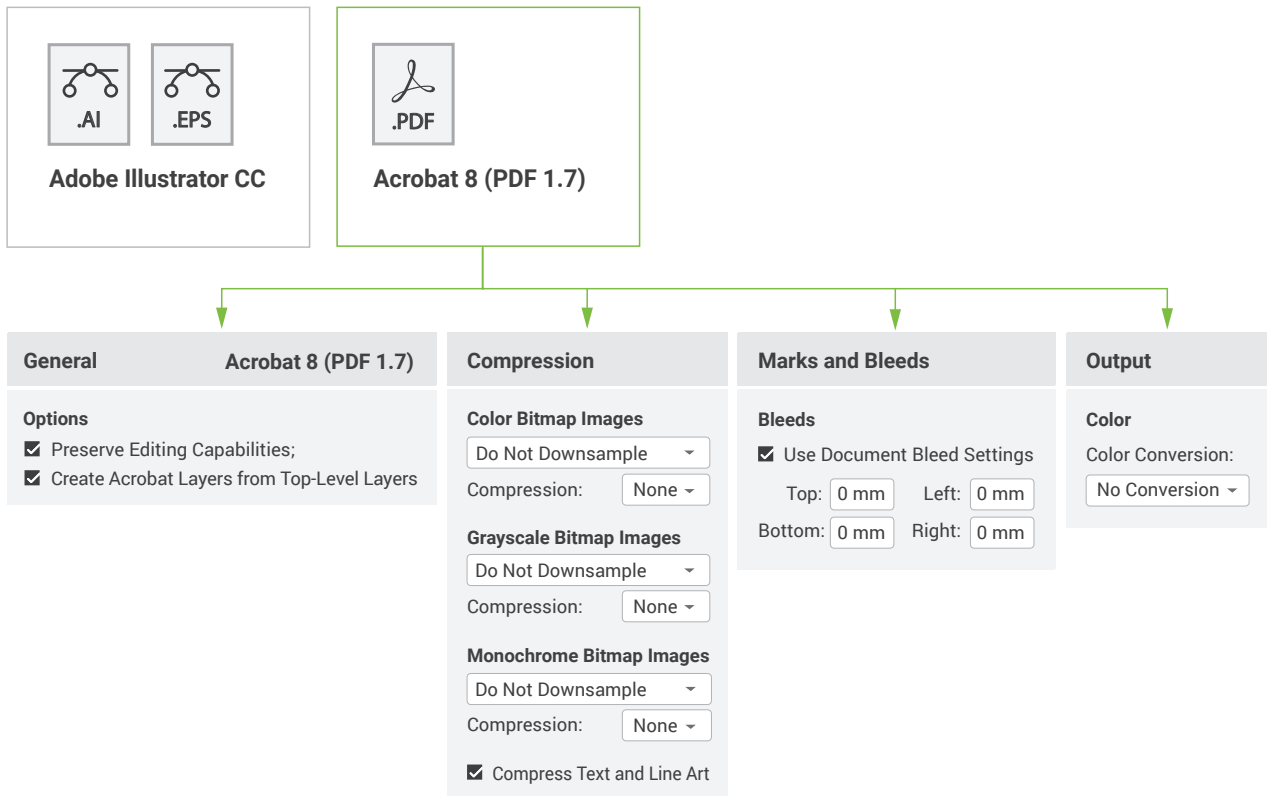


The following specification is related to graphic files intended for printing in Polipaks production. Its goal is to fulfill the high standards of flexo-print.

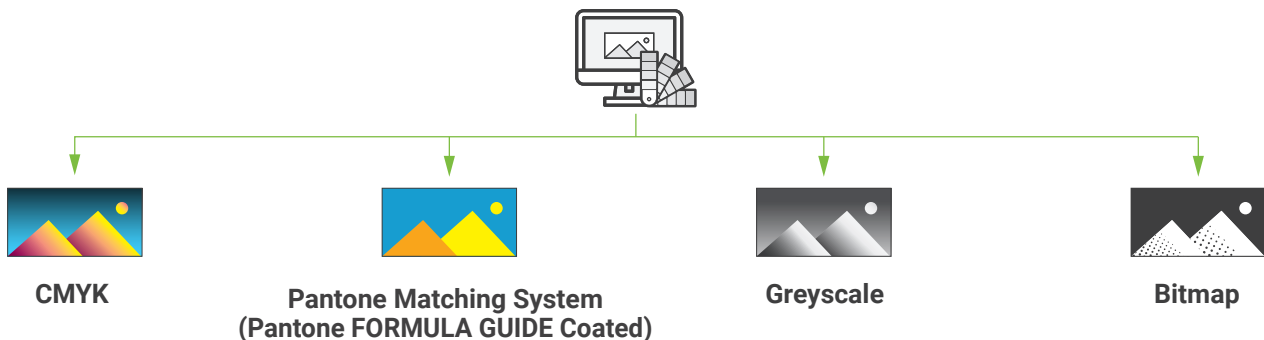
Any deviations from below mentioned requirements must be agreed between customer and Polipaks.

## 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%**;

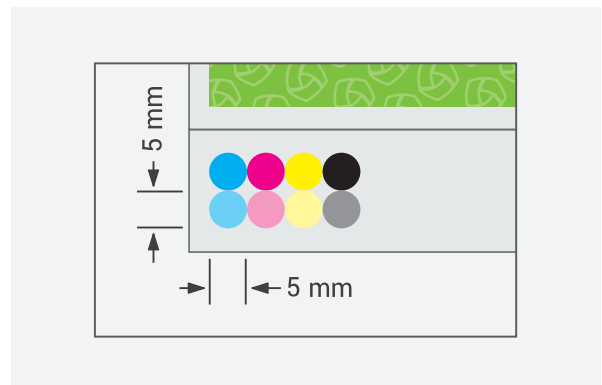
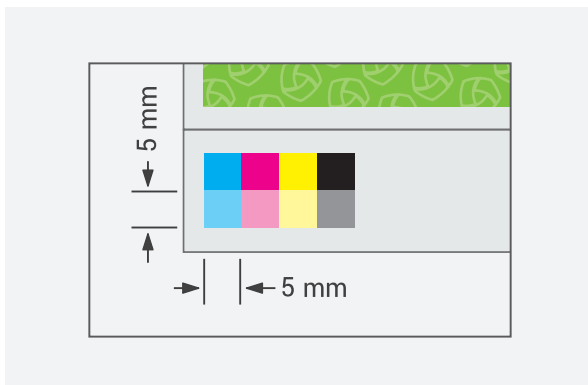
**2.6** Using the opacities and different blending modes (Screen, Multiply, ...) is allowed, except for the use of opacity in the gradient sliders and on Gradient Mesh object (Adobe Illustrator);

**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-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**:



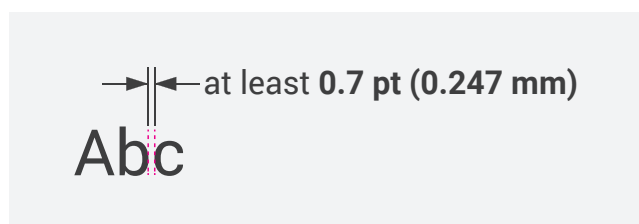
## 4 TEXT

### 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.

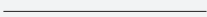



### 4.3 For successful text adaptation to print the following files are required:

- ▶ 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**;

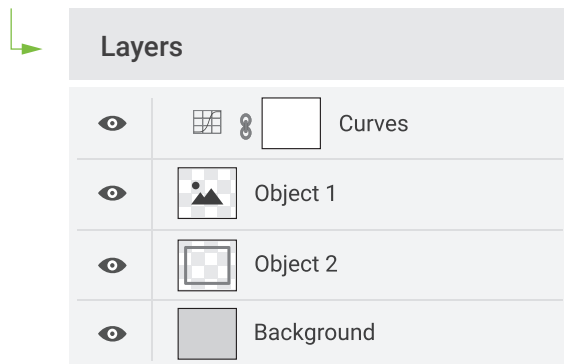
## 6 IMAGES

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

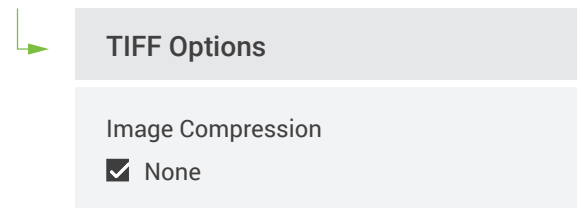
6.2 If the artwork contains **raster images**, they should be attached **separately**:



**PSD files - with layers**



**TIFF files - without compression**

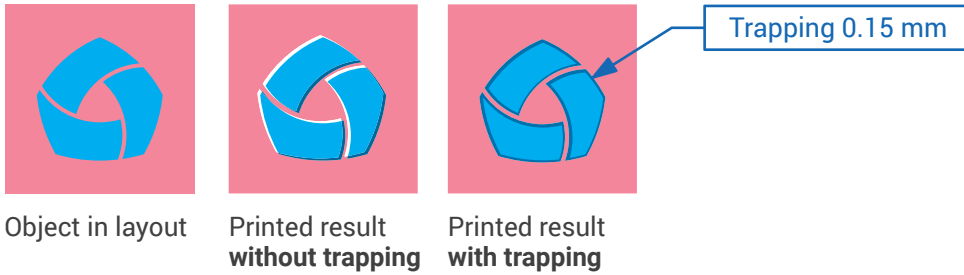




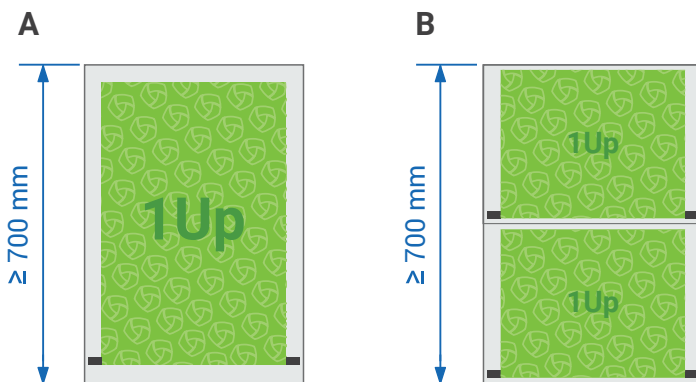
## 10 TRAPPING

Trapping - 0.15 mm\*

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

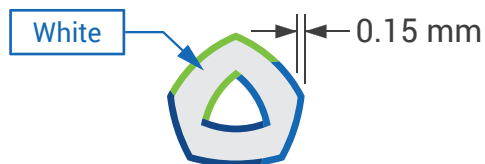


\*If the **Step & Repeat** file height is greater than 700 mm, **0.2 mm** trapping is applied:



## 11 PULLBACK FOR WHITE INK

For art elements: **0.15 mm**:





For photo tags: **0.3 mm**:



## 12 VARNISH COATING

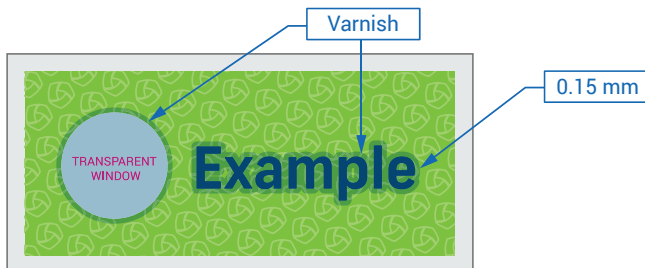
### 12.1 Minimum object sizes:

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

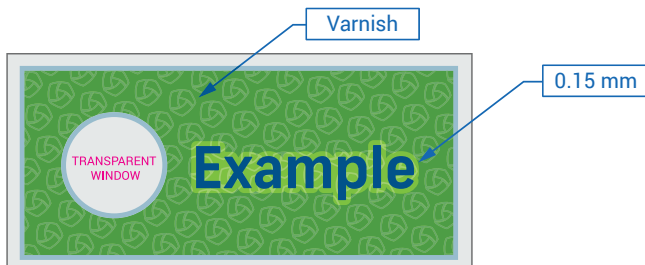
**12.2** If the varnish is applied in **one** run (at the same time with other inks) - the varnish is applied **1:1**;

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

a) **Fragmentary** Varnish coating:



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
















## 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