

### Technical company data PN 17-152-16

<b>EKO PRINT PAPER AND CARTON</b>	<b>PN 17-152-16</b>
<b>EKO DRAWING PAPER</b>	<b>ČJK 431,432</b>
<b>EKO CARTON</b>	<b>ČJK 432,433</b> <b>ČJK 434</b>

This company regulation is applicable for manufacture, testing and deliveries of EKO PRINT papers and EKO PRINT cartons designed for printing by various technologies, notebook making and EKO drawing papers and EKO cartons with BLUE ANGEL certificate, which are suitable for production of sketchbooks and other uses in paper industry and other branches of industry. Paper and board is made of 100% recycled fibre.

#### 1. GENERAL INFORMATION

##### 1.1. Definition of basic terms

- 1.1.1. Paper is a product with grammage lower than 150g/m<sup>2</sup>. Carton is a product with grammage of 150 g/m<sup>2</sup> or more.
- 1.1.2. EKO papers and cartons are made of waste paper from various groups according to ČSN EN 643
- 1.1.3. Papers and cartons are made in types and under labels shown in summary sheet number 1.

#### Summary sheet number 1 - papers and cartons

Name	Label	Purpose
1.EKO print paper	EP	Printing, especially offset print, or other printing technologies, production of notebooks and other uses
2.EKO print plus paper	EPP	
3.Eko print carton	EPK	
4.EKO print plus carton	EPPK	
5.EKO drawing paper	EDP	Production of sketchbooks and other use
6.EKO carton	EBK	

#### 2. TECHNICAL INFORMATION

##### 2.1. General information

- 2.1.1. Papers and cartons are made in natural color or are coloured, machine glazed.
- 2.1.2. Papers and cartons have to be evenly processed and without any weak spots or fibre clusters.
- 2.1.3. Papers and cartons should not be creased or have any overlap marks, holes, curtains, ruptures and without any other mechanical damage.
- 2.1.4. Papers and cartons in the same delivery mustn't have significant variations in color shade.

##### 2.2. Acceptable deviations

- 2.2.1. Only sporadic defects inside the reels, which are not noticeable during the rewinding process, like imperceptible lap marks and curtains.
- 2.2.2. Paper and carton contains remains of impurities from the waste papers and color shades
- 2.2.3 The wiewthrough of the paper might be cloudy (nebulous).
- 2.2.4 The individual types of EKO papers.differ from each other mostly my the guaranteed minimal whiteness, which is reached by using certain kinds of waste paper. Paper and carton are coloured to an approximate color shade which is affected by input resources.

##### 2.3. Qualitative parameters

- 2.3.1. Qualitative parameteres of the paper and carton have to correspond with the values stated in the summary sheet number 2.

#### Summary sheet number 2 - papers and cartons

Qualitative parameters	Unit of measure	EP EDP	EPP	EPK EBK	EPPK	Testing norm
Grammage	g/m <sup>2</sup>	60 - 149 + - 3%		150 - 250 + - 4 %		ČSN EN ISO 536
Index of the strength in tension limit, average, min.	Nm/g	23,5	25	19,6	22	ČSN EN ISO 1924-2
Whiteness ISO (D65)	%	69	76	69	76	STN ISO 2470
Smoothness accord. to Bekk, min.	s	15	20	8	8	ČSN ISO 5627
Water absorbtion according to Cobb60	g/m <sup>2</sup>	40	25	40	25	ČSN ISO 535
Level of bonding by line-method, min.	mm	/	1,2	/	1,2	ČSN 50 0331
Moisture	%	4 - 7				ČSN ISO 287

## 2.4. Dimensions and quality

2.4.1. Papers and cartons are produced in the reels, sheets and leafs. The reels are produced in the width and diameter as agreed. The leafs in the A4 format, the sheets in the A3 format and also in the other dimensions according to the agreement.

### 2.4.2. Acceptable dimension deviation

- a) reels: 1) width - acceptable tolerance is + - 5%  
but maximum + - 3mm (for the reels wider than 60 cm)  
but minimum + - 2 mm ( for the reels narrower than 60 cm)
- 2) diameter - without the indication of the maximum and minimum diameter size obtains the tolerance from – 4 cm up to + 2 cm  
with the indication of the min. diameter size is the tolerance - 2cm  
with the indication of the max. diameter size is the tolerance+ 2 cm
- b) sheets 1) tolerance length and width format A3 and large sized maximum + - 2 mm  
2) vertically a maximum 0,2 % from the dimension, however a maximum of 2 mm.
- c) leafs 1) the tolerance of the length and width in format A4 is + - 1 mm  
2) vertically a maximum of 1 mm

### 2.4.3. Winding of the reels

- a) Number of the reel ruptures The diameter of the reel till 100cm - the paper web can be ruptured at maximum 3x  
The diameter of the reel above 100cm - the paper web can be ruptured at maximum 4x  
The diameter of the reel above 100cm and the grammage 80g/m<sup>2</sup> and lower - the paper web can be ruptured at maximum 5x by the 10% of the whole order

### b) the performance of the patch-up

The performance of the patch-up has to be fast and clean without any patch-up of the contiguous layers. The patched-up place has to be able to pass through the manufacturing machine without any problems. The patch-up place has to be visibly marked at the coils of the reels by coloured line or by sticking coloured pieces of paper according to the customer wish.

## 3. TESTING

3.1. The samples for testing are taken according to the norm ČSN EN ISO 186.

3.2. The average sample, from which are the sample sheets taken, is climatized according to the norm ČSN ISO 187.

3.3. The paper attributes are determined according to valid norms, which are stated in the relevant summary sheet.

The dimensions of the reels and sheets are checked by the steel measuring instruments according to the norm ČSN 25 11 04.

## 4. PACKING, LABELLING, TRANSPORT AND STOCKING

### 4.1. Packing and signification

4.1.1. The packing and labelling of the paper is done in accordance to internal regulations of the producer, unless agreed otherwise. All products ( reels, sheets ) which are dispatched from the plant have to be protected against atmospheric changes and have to stay packed till the production process is finished.

4.1.2. The product is labelled by the manipulation sign „PROTECT AGAINST THE RAIN“ according to the norm ČSN EN ISO 780.

4.1.3. The package of the product is marked in accordance with Act, number 477/2001 Sb., On packages, and ČSN 77 0052-2, Waste Packages, Identification sign for the evaluation.

### 4.2. Transport and stocking

4.2.1. Papers and cartons are delivered in the enclosed, dried and cleaned means of the transport, which are ensured against the movement and the damage with the usual way of the transport.

4.2.2. Paper is stored in the enclosed, cleaned, dried and ventilated rooms, has to be protected against direct climatic influences, ground moisture, radiating heat and against dirt and pollution.

To ensure optimal stocking conditions it is recommended to keep the relative moisture between 40 - 60 % and the temperature 20-25 °C.

4.2.3. Reaching the thermal balance between the stocking area and the printer. The paper has to reach the thermal balance before it goes through the printing process. The required period depends on the amount of the paper and on the atmospheric conditions, see the summary sheet number 3.

**The summary sheet number 3 – The period of the thermal balance establishment**

Paper quantity		Temperature difference between the stocking area and the printer.				
		5°C	10°C	20°C	30°C	35°C
m3	kg	The period for the establishment of the thermal balance in hours				
0,4	320	9	17	36	64	92
0,6	480	10	20	42	76	106
1,0	800	11	23	46	84	115

Producer:

Company name:

**Paper Mill Aloisov a.s.**

Facility:

**789 63 Ruda nad Moravou-Hostice 176 CZ.**

Registered seat at

**Čermenská 910, Vítkov CZ.**

IČO

**29383480**

Effective date:

**1-st of April 2016**