

Registered seat: Čermenská 910, 749 01 Vítkov CZ  
 Facility: Ruda nad Moravou-Hostice č.p. 176, 789 63, CZ

## Technical company data PN 17-002-11

<b>EKO FLUTING PAPER AND CARTON</b>	<b>PN 17-002-11</b>
	<b>ČJK 681</b>

This company regulation is applicable for manufacture, testing and deliveries of EKO fluting papers and cartons.  
 EKO fluting papers and cartons are used for the production of paper honeycomb, intersperse layers and other usage.  
 Paper is made from 100% recycled fibres.

### 1. GENERAL CONDITIONS

#### 1.1. Definition of basic terms

- 1.1.1. Paper is a product with grammage lower than 150 g/m<sup>2</sup>.  
 Carton is a product with grammage of 150 g/m<sup>2</sup> or more.
- 1.1.2. Paper and carton are made from waste paper from different groups according to ČSN EN 643.

### 2. TECHNICAL INFORMATION

#### 2.1. General information

- 2.1.1. Papers and cartons are made in natural colour, machine unglazed.
- 2.1.2. Papers and cartons are possible to produce in brown colour or coloured, glued or machine glazed according to customer's demand.

#### 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 contain the impurities from the waste paper.
- 2.2.3. Paper and carton are produced in different colour shades, without keeping one unique colour shades for the whole order.

#### 2.3. Qualitative parameters

- 2.3.1. 1. Qualitative parameters of the paper and carton have to correspond with the values stated in the summary sheet number 1.

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

Qualitative parameters	Unit of measure	EF	EFK	Testing norm
Grammage	g/m <sup>2</sup>	60 - 149 + - 8%	150 - 250 + - 8 %	ČSN EN ISO 536
Index of the strength in tension limit - average, min	Nm/g	20	18	ČSN EN ISO 1924-2
Water absorption according to Cobb <sub>60</sub> , max. (glued paper, carton)	g/m <sup>2</sup>	till 60	till 60	ČSN ISO 535
Moisture	%	4 - 7		ČSN ISO 287

\* The customer's demands for the change of parameters are possible to deal in the buying contract.

## 2.4. Dimensions and quality

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

### 2.4.2. Acceptable dimension deviation

- a) reels:
- 1) width
    - acceptable tolerance is  $\pm 5\%$
    - but maximum  $\pm 3$  mm ( for the reels wider than 60 cm)
    - but minimum  $\pm 2$  mm ( for the reels narrower than 60 cm)
  - 2) diameter
    - without the indication of the maximum and minimum diameter size the tolerance obtains from  $-4$  cm up to  $+2$  cm
    - with the indication of the minimum diameter size is the tolerance  $-2$  cm.
    - with the indication of the maximum diameter size is the tolerance  $+2$  cm.
- b) sheets
- 1) the tolerance of the length and width of the format A3 and of the big format is maximum  $\pm 2$  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  $\pm 1$  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  $100$  cm -  
the paper web can be ruptured at maximum  $3$  times  
The diameter of the reel above  $100$  cm -  
the paper web can be ruptured at maximum  $4$  times.  
The diameter of the reel above  $100$  cm and the grammage till  $80$  g/m<sup>2</sup> and lower - the paper web can be ruptured at max.  $5$  times 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 dimension 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, dry and cleaned means of the transport, which are ensured against the movement and the damage with usual way of the transport.

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

To ensure optimal stocking 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 2.

#### The summary sheet 2 number - 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
m <sup>3</sup>	kg	The period of the thermal balance establishment 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.**

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**29383480**

Effective date:

**1-st of September 2011**