

Registered seat: Čermenská 910, 749 01 Vítkov CZ

Facility: paper mill Aloisov, 789 63 Ruda nad Moravou

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|--|--------------|
| SULPHATE PACKAGING PAPER AND CARTON BLEACHED AND UNBLEACHED | PN 17-179-10 |
| | CJK 412, 413 |

This company regulation is applicable for manufacture, testing and deliveries of sulphate packaging paper and carton made from unbleached sulphate wood pulp used for packaging of paper industry products. It shall also apply for packaging paper and carton made from bleached pulp, which is also used for packaging and is suitable for offset printing and manufacture of envelopes and mail packages and other uses.

1. GENERAL INFORMATION

1.1. Definition of basic terms

- 1.1.1. Paper is a product with grammage lower than 150g/m². Carton is a product with grammage of 150 g/m² or more.
1.1.2. Papers are made of bleached or not-bleached pulp.

2. TECHNICAL INFORMATION

2.1. General information

- 2.1.1. Papers and cartons are made in white or natural color, machine glazed.
2.1.2. Papers and cartons have to be evenly processed 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.

2.2. 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.

2.3. Qualitative parameters

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

Paper and carton summary sheet number 2

| Qualitative parameters | Unit of measure | Parameters | | Testing Norm |
|--|------------------|-----------------|-------------------|-------------------|
| | | BLEACHED | NOT-BLEACHED | |
| Grammage | g/m ² | 80 - 160 + - 4% | 70 - 250 + - 4% | ČSN EN ISO 536 |
| Index of the strength in tension limit, min. reels, lengthwise sheets, average | Nm/g | 60 | lengthwise 120-60 | ČSN EN ISO 1924-2 |
| | | 45 | lengthwise 120-45 | |
| Water absorption according to the Cobb60 maximum | g/m ² | 45 | 45 | ČSN ISO 535 |
| Strength in compression | kPa | | 70-80 -210 | ČSN ISO 534 |
| | | | 90 -300 | |
| | | | 100-110 -320 | |
| | | | 120-130 -350 | |
| | | | 140-170 -380 | |
| Moisture | % | 3 - 6. | 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 40 cm)
If the customer requests compliance of the maximum and minimum width the tolerance will double.
- 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 minimum diameter size is the tolerance + 4cm
with the indication of the maximum diameter size is the tolerance - 6 cm
- b) sheets 1) length and width of the format A3&A4 + - 0,2% from the dimension, by others maximum + - 2mm
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 70cm - the paper web can be ruptured at maximum 1x
The diameter of the reel above 70cm - the paper web can be ruptured at maximum 2x
The diameter of the reel above 70cm and the grammage 80g/m² and lower - the paper web can be ruptured at maximum 3x in 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 attribute is determined according to the 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 despatched from the plant have to be protect 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:

MELECKY a.s.**Facility: Paper Mill Aloisov, Ruda nad Moravou CZ.****Registered seat at: Čermenská 910, Vítkov CZ.****IČO : 25904019**

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