

Paper-towel rolls for centre-feed dispensing devices — Specification

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Foreword

This standard has been prepared by the Technical Committee on Paper and paper products under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

Paper towels are the second largest application for tissue paper in the consumer sector. This kind of tissue can be made from 100% chemical pulp to 100% recycled fibre or a combination of the two. Normally, some long fibre chemical pulp is included to improve strength.

Paper towels are produced on a paper machine that has a single large steam heated drying cylinder (yankee dryer) fitted with a hot air hood. The raw material is paper pulp. The yankee cylinder is sprayed with adhesives to make the paper stick. Creping is done by the yankee's *doctor blade* that is scraping the dry paper off the cylinder surface. The crinkle (crêping) is controlled by the strength of the adhesive, geometry of the doctor blade, speed difference between the yankee and final section of the paper machine and paper pulp characteristics.

Parameters covered in the Standard include: Grammage, tensile strength, water absorption among others.

During the preparation of this Standard reference was made on;

SANS 1887-8:2008 Tissue paper Part 8: Paper-towel rolls for centre-feed dispensing devices.

Acknowledgment is hereby made for the assistance derived from this source.

Kenya Standard

**Paper-towel rolls for centre-feed dispensing devices —
Specifications**

1. Scope

This Kenya standard specifies the requirements and test methods for Paper towels supplied in rolls and intended primarily for use in a centre feed dispensing device for hygiene purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the KEBS Standards Division.

KS ISO 12525-8:2010 Tissue paper and tissue products -- Part 8: Water-absorption time and water-absorption capacity, basket-immersion test method

KS 1999:2007 Facial tissue paper – Specification

KS ISO 12525-4:2005 Tissue paper and tissue products -- Part 4: Determination of tensile strength, stretch at break and tensile energy absorption

KS ISO 12525-5:2005 Tissue paper and tissue products -- Part 5: Determination of wet tensile strength

ISO 186:2002, Paper and board – Sampling to determine average quality.

ISO 8784-1:2005 Pulp, paper and board -- Microbiological examination -- Part 1: Total count of bacteria, yeast and mould based on disintegration

3 Definitions

For the purposes of this part Standard the definitions given in KS 24:2003 shall apply.

4 Requirements

4.1 Material

4.1.1 Paper

4.1.1.1 The paper shall have a crêped texture (embossed or un embossed).

4.1.1.2 The paper shall be coloured or white.

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4.1.1.3 The ply of the paper shall be single- or double-ply .

4.1.1.4 The physical and chemical properties of the paper shall comply with the requirements as listed in table 1 below.

Table 1: Mechanical and Chemical Requirements

Serial no.	Property			Requirement	Test method
1	Substance, g/m ² ,min	Single ply	Pure(Virgin)fibre	17	KS ISO 12525-6:2005
			Blended fibre	19	
			Recycled fibre	19	
		Double ply(measured as single ply)	Pure(Virgin)fibre	15	
			Blended fibre	17	
			Recycled fibre	17	
2	Dry Tensile strength N/m of width, min.	M D	Single ply	206	KS ISO 12525-4:2005
			Double ply	224	
		C D	Single ply	103	
			Double ply	112	
	Wet Tensile strength N/m of width, min.	MD	Single ply	33	KS ISO 12525-5:2005
			Double ply	36	
CD		Single ply	17		
		Double ply	18		

3	Water absorption, mm/min, minimum	Single ply	10	KS ISO 12525-8:2010
		Double ply	6	
4	pH value, hot extract	Double and single ply	4.4- 10.0	KS ISO 29681:2009
5	Moisture content , percent	Double and single ply	4.0 - 7.0	KS ISO 287:2009
6	Brightness of white paper, %, min		73	KS ISO 2470-1:2009

4.1.2 Cores

The roles with core shall be of a material that is suitable for the purpose and such that the core will not become deformed or collapse under normal conditions of transportation, storage and usage.

4.2 Construction of roll

4.2.1 The paper, consisting of one or two plies, as relevant, shall have been firmly wound onto a full length core , which shall be easily removable by hand.

4.2.2 The inner end of the paper on a roll shall, after removal of the core, be sufficiently free to allow the paper to be dispensed from the inside by pulling the free end of the paper through one end of the opening from which the core has been removed.

4.2.3 The outer end of the paper on a roll shall be so secured to the roll that the end remains intact during normal handling and transportation but can be freed without damage to more than one layer of paper.

4.2.4 The paper on a roll shall be of one continuous length and there shall be at most one un spliced break or at most one neat splice in a roll of paper, so as not to impair the dispensing process of the paper.

4.2.5 The paper on a roll shall be perforated or unperforated.If perforated the length of the perforation shall as specified in clause 4.3.1, each of ten sheets in the roll under test shall be severed along a row of perforations and the tear shall be manifestly due to the perforations only.

4.3 Dimensions

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4.3.1 The length of the paper roll shall be at least 150 m. The length of the perforated sheet shall be not less than 250 mm and not more than 500 mm unless otherwise.

4.3.2 The width of the paper web on a roll shall be at least 205 mm and 245mm maximum.

4.3.3 The overall width of a roll shall not exceed 245 mm.

4.3.4 The internal diameter of a core shall be at least 50 mm for paper towels with a core.

4.4 Microbial examination

When tested in accordance with KS ISO 8784-1:2005, the paper towels shall have a maximum total plate count of 300 count/gram.

5 Packaging

Rolls shall be packed in accordance with good commercial practice, in acceptable corrugated board boxes or suitable bulk packages, package containing rolls of paper towel of the same colour and ply, either perforated or unperforated shall be packed together.

6 Marking

6.1 Corrugated board or bulk packages

The following information shall appear in legible and indelible marked on each corrugated board box or suitable bulk packages:

- a) the name or trade name or trademark of the manufacturer;
- b) a description of the product (i.e. paper towels for centre-feed dispensers);
- c) whether the rolls are perforated or unperforated;
- d) indication of colour
- e) the ply of the paper.
- f) the length of the roll
- g) fibre composition virgin, blended ,recycled etc.

7.2 Identification marking

Identification marking shall be legibly and indelibly applied to each roll or to the inside of the core.