**Machine Glazed Kraft Paper used for packaging of dry food —Specification**

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**Foreword**

This Kenya Standard was prepared by the Technical Committee on Packaging (053) under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

MG or Machine Glazed is an uncoated paper with shiny appearance on one side and a rough surface on the other side. It combines high tensile strength properties of Kraft paper together with smoothness and shine for excellent printability. MG is an ideal base paper for a vast range of packaging solutions and is also safe for direct food contact. MG paper shows low grammage variation across the profile of the paper and hence exhibits very good machinability.

In the manufacturing sector, machine glazed Kraft paper is used for packaging of dry food such as flour, Sugar, cereals etc.

This standard shall be useful to manufacturers of dry foods, converters, importers, exporters, standards enforcement agencies and other stakeholders.

Parameters covered in the standard include tensile strength, tear strength, burst index, pH, cobb, dimension Limits of heavy metals and organic contaminants, Microbiological requirements among others.

During the preparation of this standard, reference was made to the following document:

**Information from the packaging Industry**

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

## Machine Glazed Kraft Paper used for packaging of dry food —Specification

**1 Scope**

This Kenya Standard specifies the requirements and methods of sampling and test for Machine Glazed Kraft Paper used for packaging of dry food such as sugar, flour, grains etc.

**2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

*EAS 880, Waxed paper for packaging of confectionery — Specification*

*EAS 930 Paper and board food contact packaging material — Specification*

*EAS 933, Paper and board intended to come into contact with foodstuffs — Determination of formaldehyde in an aqueous extract*

[*ISO 186 Paper and board -- sampling to determine average quality*](https://www.iso.org/contents/data/standard/03/42/34233.html)

*ISO 216 Writing paper and certain classes of printed matter -- Trimmed sizes -- A and B series, and indication of machine direction*

*ISO 536 Paper and board -- Determination of grammage*

*ISO 2758 Paper -- Determination of bursting strength*

*ISO 1974 Paper -- Determination of tearing resistance -- Elmendorf method*

*ISO 1924-3, Paper and board — Determination of tensile properties — Part 3: Constant rate of elongation method (100 mm/min)*

*ISO 187 Paper and board -- Conditioning of samples*

*ISO 9184-1**Paper, board and pulps -- Fibre furnish analysis -- Part 1: General method*

[*ISO 4046-1*](http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=29836) *Paper, board, pulps and related terms -- Vocabulary -- Part 1: Alphabetical index*

*ISO 4046-2. Defines terms related to pulping, in both English and French.*

*ISO 4046-3: Defines terms related to paper making, in both English and French*

*ISO 4046-4: Defines terms related to paper and board grades and converted products, in both English and French.*

*ISO 5637 Paper and Board -- Determination of water absorption after immersion in water*

*ISO 6588-1 Paper, board and pulps — Determination of pH of aqueous extracts — Part 1: Cold extraction*

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

*ISO 16532-3 Paper and Board -- Determination of grease resistance -- Part 3: turpentine test for voids in glassine and greaseproof papers*

*ISO 3781 Paper and Board -- Determination of tensile strength after immersion in water*

**3. Terms and definition**

For the purposes of this standard the terminologies given in KS ISO 4046 part 1 to 5 and others below shall apply.

**3.1**

**Machine glazed Kraft Paper**

paper which has had one side made smooth and glossy by drying in contact with heated, polished metal cylinder which forms part of the drying section of the machine

**4 Requirements**

**4.1 General requirements**

The fibre used shall be purely virgin pulp and shall be machined glazed Kraft paper and free from visible specks, greases, cuts holes and other paper defects

**5. Specific requirements**

**5.1 Specific requirements for machine glazed Kraft paper**

Machine glazed Kraft paper shall meet the physical requirements as specified in table 1

Table 1 — Physical requirements for machine glazed Kraft paper

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/No.** | **Characteristic** | | **Requirement** | | | | | **Test method** |
|  | Grammage, g/m2, min, ± 5 % | | 70 | 80 | 90 | 100 | 110 | KS ISO 536 |
|  | Moisture content, %, range | | 5 — 8.5 | | |  | | KS ISO 287 |
|  | Tensile strength, kN/m, min | MD | 5.2 | 5.9 | 6.6 | 7.1 | 7.6 | KS ISO 1924-3 |
| CD | 2.9 | 3.1 | 3.4 | 3.8 | 3.9 |
|  | Stretch, %, min | MD | 1.4 | | | | | KS ISO 1924-3 |
| CD | 3 | | | | |
|  | Burst Index,kPa.m2/g | | 3.2 | 3.5 | 3.7 | 3.8 | 3.6 | *KS ISO 2758* |
|  | Tear Strength, mN, min. | MD | 410 | 495 | 590 | 710 | 805 | KS ISO 1924-2 |
| CD | 470 | 575 | 670 | 795 | 905 |
|  | TEA Index, j/g, min | MD | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | KS ISO 1924-3 |
| CD | 1 | 1 | 1 | 1 | 1 |
|  | pH | 5 —8.5 | | | | | | KS ISO 6588- |
|  | Cobb (60s),max | 35 | | | | | | *KS ISO 5637* |

|  |
| --- |
|  |

**5.2 Limits of heavy metals and organic contaminants for machine glazed Kraft paper**

machine glazed Kraft paper shall meet the Limits of heavy metals and organic contaminants as specified in EAS 930

**5.3 Microbiological requirements** for **machine glazed Kraft paper**

|  |  |  |  |
| --- | --- | --- | --- |
| Machine glazed kraft paper shall meet the microbial requirements as specified in EAS 930 | *Pseudomonas aeruginosa*, cfu/g | Not detected in 1 g of the product |  |
|  | *Staphylococcus aureus*, cfu/g |
|  | *Candida albicans*, cfu/g |
|  | *Escherichia coli*, cfu/g |

**5.4 Dimension**

**5.4.1** When tested in accordance with ISO 216 the dimensions (length and width) of the sheet shall be as specified in the marking within a tolerance of ± 0.5 %

**5.4.2** For machine glazed Kraft paper supplied in reels, the width and diameter of the reel shall be as declared and the diameter shall be within a tolerance of ± 6 mm when tested in accordance with Annex A.

**6 Packaging and Labelling**

**6.1 Packaging**

**6.1.1** Machined glazed Kraft paper shall be packed in suitable materials that prevents it from damage, contamination during handling, storage and transportation.

**6.2 Labelling**

**6.2.1 Bulk package**

The bulk package of machine glazed Kraft paper shall be legibly and indelibly marked with the following information on the outer .

1. Manufacturer’s name, address and /or registered trade mark.
2. Description of goods, “machine glazed Kraft paper”.
3. Dimensions .
4. Batch number or code
5. Instruction for correct use
6. Instruction for storage and disposal.
7. The declaration, ‘country of origin.

**6.2.2 Machine glazed Kraft paper**

The Machine glazed Kraft paper shall be legibly and indelibly marked with the following information

1. Manufacturer’s name, address and /or registered trade mark.
2. Batch number or code
3. Instruction for correct use, storage and disposal.

**7 Sampling**

Sampling of the machined glazed Kraft paper shall be done in accordance to ISO 186

Annex A  
  
(normative)  
Measurement of dimensions

**A.1** Measure to the nearest 0.5 mm, the width, (parallel to the cross direction of the paper) of each five test specimen taken across full width of five separate rolls and record the average of the results.

**A.2** Measure to the nearest 1 mm, the diameter of each of the five rolls and record the results. Check for compliance with 5.4.2.