**Grease proof /Grease resistance), paper in direct contact with food containing grease and oil—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.

Grease proof/Grease resistance paper is used as packaging material impermeable to oil and [grease](https://en.wikipedia.org/wiki/Fat) in food.Grease proof paper is produced by refining the paper stock and thus create a sheet with very low porosity. This sheet is [super calendared](https://en.wikipedia.org/wiki/Supercalendered) to further improve the density, creating a paper called [glassine](https://en.wikipedia.org/wiki/Glassine). The glassine is treated with [starches](https://en.wikipedia.org/wiki/Starch), [alginates](https://en.wikipedia.org/wiki/Alginate) or [Carboxy methyl cellulose](https://en.wikipedia.org/wiki/Carboxymethyl_cellulose) in a [size press](https://en.wikipedia.org/wiki/Sizing) to fill pores or treat the paper chemically to make it fat repellent. Grease resistant paper is produced by coating paper with starch which is impregnated with appropriate grease resistant agent.

In the manufacturing sector, the Grease proof /grease resistant paper is converted into bags, wraps, laminates which are used to package greasy and oily food stuff.

This standard shall be useful to manufacturers of food that has grease or oil, fast food outlets, paper converters, importers, exporters, standards enforcement agencies and other stakeholders.

Parameters covered in the standard include grease or oil resistance, 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:

**IS 662, Specification for grease proof paper.**

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

**Grease proof /Grease resistance), paper in direct contact with food containing grease and oil—Specification**

**1 Scope**

This Kenya Standard specifies the requirements and methods of sampling and test for Grease proof/grease resistant in direct contact with greasy and oily food.

**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 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 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 16532-1 Paper and board — Determination of grease resistance — Part 1: Permeability test*

*ISO 16532-2 Paper and board -- Determination of grease resistance -- Part 2: Surface repellency test.*

*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**

**Greaseproof paper**

Paper free from mechanical pulp having a high resistance penetration by grease or oil

3.2

**Grease resistance paper**

Paper having good to very high resistance to penetration by grease or fats

**4 Requirements**

**4.1 General requirements**

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

**5. Specific requirements**

**5.1 Specific requirements for Grease proof/Grease resistance paper**

Greaseproof/Grease resistancepapershall meet the physical requirements as specified in table 1.

Table 1 — Physical requirements for Grease proof/ Grease resistance paper

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/No.** | **Characteristic** | | **Requirement** | | | | | | **Test method** |
|  | Grammage, g/m2, min, ± 5 % | | 35 | 40 | 50 | 60 | 70 | 80 | KS ISO 536 |
|  | Moisture content, %, range | | 4 — 8.5 | | |  | | | KS ISO 287 |
|  | Tensile strength, kN/m, min | MD | 2.5 | 2.85 | 3.5 | 4.5 | 5 | 5.9 | KS ISO 1924-2 |
| CD | 1.4 | 1.65 | 2 | 2.4 | 2.7 | 3.1 |
|  | Wet tensile strength, kN/m, min | MD | 0.31 | | | | |  | KS ISO 3781 |
| CD |
|  | Burst Strength | | 110 | 165 | 220 | 285 | 375 | 475 |  |
|  | Burst Index,Kpa.m2/g | | 3.2 | 3.5 | 3.7 | 3.8 | 3.6 | 3.6 | *KS ISO 2758* |
|  | Tear Strength, min. | MD | 140 | 165 | 220 | 285 | 375 | 475 | KS ISO 1924-2 |
| CD | 155 | 185 | 245 | 325 | 420 | 535 |
|  | pH | 5 —8 | | | | | | | KS ISO 6588- |
|  | Cobb (60s), g/m2,max | 35 | | | | | | | *KS ISO 5637* |
|  | Grease proof, seconds, min | 1200 | | | | | | | KS ISO 16532-2 |
|  | Grease resistance, KIT value, min | 2 | | | | | | | KS ISO 16532-1 |

**5.2 Limits of heavy metals and organic contaminants**

Shall meet the requirements as specified in EAS 930

**5.3 Microbiological requirements**

Shall meet the requirements as specified in EAS 930

**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 % or 3 mm whichever is less

**5.4.2** For 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** Grease proof grease resistance paper shall be packed in suitable materials that prevents them from damage, contamination during handling, storage and transportation.

**6.2 Labelling**

**6.2.1 Bulk package**

The bulk package of Grease proof /grease resistant 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, “Grease proof /grease resistant”.
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 Grease proof /grease resistant paper**

The Grease proof /grease resistant 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 Grease proof /grease resistant 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.