

**SAUDI STANDARDS, METROLOGY AND
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Paper Used in Printing the Holy Quran

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Paper Used in Printing the Holy Quran

1. Scope and area of application

This Saudi standard is concerned with the requirements that must be met in specific paper that used in printing the Holy Quran pages.

2. Complementary references

- 2. 1 SASO-ISO-186 Paper and board - Sampling to determine average quality
- 2. 2 SASO-ISO-187 Paper, board and pulps - Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples
- 2. 3 SASO-ISO-536 Paper and board - Determination of grammage
- 2. 4 ISO 534 Paper and board — Determination of thickness, density and specific volume
- 2. 5 SASO-ISO-8791-1 Paper and board - Determination of roughness/smoothness (air leak methods) – Part 1: General method
- 2. 6 SASO-ISO-2470-1 Paper, board and pulps - Measurement of diffuse blue reflectance factor – Part 1: Indoor daylight conditions (ISO brightness)
- 2. 7 SASO-ISO-2471 Paper and board - Determination of opacity (paper backing) - Diffuse reflectance method
- 2. 8 SASO-GSO-ISO-287 Paper and board — Determination of moisture content of a lot — Oven-drying method
- 2. 9 ISO 1974 Paper — Determination of tearing resistance — Elmendorf method
- 2. 10 SASO-GSO-ISO-1924-2 Paper and board — Determination of tensile properties — Part 2: Constant rate of elongation method (20 mm/min)
- 2. 11 SASO-ISO-1924-3 Paper and board - Determination of tensile properties – Part 3: Constant rate of elongation method (100 mm/min)

3. Definitions

- 3. 1 Paper Used in Printing the Holy Quran:
It is a paper manufacturing from white virgin pulp after treated with chemical additives. In addition, it is treated with other material to improve its characteristics such as color and gloss. As examples of this added materials lime, starch, metal oxides, and fluorescent colors.
- 3. 2 Gloss:
The percentage of light reflection. The measurement of gloss usually from 0.0 to 100%.
- 3. 3 Opacity:
Paper characteristic which usually describe as the amount of light transfers through the paper and the measurement from 0.0 to 100%.
- 3. 4 Brightness:

The amount of light, which reflected from paper surface (paper whiteness) usually measured from 0.0 to 100%.

4. Classifications

Paper used in printing the Holy Quran is classified into two categories as follows:

4.1 Gram Weight (gm/m²)

- 4.1.1 36 gm/m²
- 4.1.2 50 gm/m²
- 4.1.3 70 gm/m²
- 4.1.4 90 gm/m²

4.2 Paper Surface Type

- 4.2.1 Coated
- 4.2.2 Uncoated

5. Technical requirements

The paper used in printing the Holy Quran must meet the following requirements:

- 5.1 The product must be free from any material defects not even small one such as (cracking, burrs, spots, and wrinkles).
- 5.2 The coated weight on the paper shall be determine on each side by gm/m².
- 5.3 The yellow and green fluorescent fibers shall be added by ten pieces of each color at least.
- 5.4 The product data sheet shall contain the value of following:
 - 5.4.1 Compression resistance.
 - 5.4.2 Water absorption.
 - 5.4.3 Roughness.
 - 5.4.4 Permeability.
 - 5.4.5 Brightness.
 - 5.4.6 Ash content.
 - 5.4.7 MD tensile strength.
 - 5.4.8 Fluorescent fibers.
- 5.5 The technical specifications of the paper shall be as in Table No. (1) And Table No. (2):

The paper used in printing the Holy Quran

Table No. (1) (coated)

Specifications	Unit	Value			
Weight	±5 gm/m ²	36	50	70	90
Thikness	±10 micrometer	35	47	66	76

Opacity	%	82 <	84 <	89 <	91 <
Moisture content	± 10%	5			
Tear resistance (CMD)	N/m	150 ≤	240 ≤	330 ≤	440 ≤

The paper used in printing the Holy Quran

Table No. (2) (uncoated)

Specifications	Unit	Value		
Weight	±5 gm/m ²	36	50	70
Thikness	±10 micrometer	38	50	78
Opacity	%	82 <	84 <	89 <
Moisture content	± 10%	5		
Tear resistance (CMD)	N/m	125 ≤	230 ≤	420 ≤

6. Sampling

A sufficient sample shall be taken from each reel or bundle in accordance with item 2.1.

7. Tests

The following tests shall be carried out on the samples drawn in accordance with item 6.

- 7.1 Visual examination
- 7.2 Estimation of the weight (Grams) according to item 2.3
- 7.3 Thickness test according to item 2.4
- 7.4 Brightness test according to item 2.6
- 7.5 Opacity test according to item 2.7
- 7.6 Moisture content test according to item 2.8
- 7.7 Tear resistance test according to items 2.9
- 7.8 Tensile strength test according to item 2.10
- 7.9 Roughness test according to item 2.5

8. Packaging:

Each produced paper reel or bundle must be completely and separately wrapped to protect them during transportation and storage. It should be stored in suitable environmental conditions.

9. Marking

Each reel or bundle of the product shall be legibly and indelibly marked with the following information in Arabic or both Arabic and English languages.

9. 1 Name of the product and type.
9. 2 Name of the manufacturer and/or trademark.
9. 3 Country of origin.
9. 4 Date of production or batch number (can be in English only).
9. 5 Dimension and net weight.
9. 6 Gloss of paper
9. 7 Color of paper
9. 8 Storage instruction
9. 9 Joints (if any)
9. 10 Barcode contains the following:
 - Order date
 - Manufacturing date
 - Batch number
 - The side of reel from the original one