

DRAFT UGANDA STANDARD

Second Edition
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Bond paper — Specification



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to coordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO);
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards; and
- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 7, *Textiles, leather, paper and related products*, Subcommittee SC 3, *Paper and paper products*.

This second edition cancels and replaces the first edition (US 821:2008), which has been technically revised. The main changes compared to the previous edition are as follows:

- the clause for terms and definitions has been added.

Bond paper — Specification

1 Scope

This Draft Uganda Standard specifies requirements, sampling and test methods for four classes (based on grammage) of general purpose bond paper suitable for printing, typewriting and for pen and ink writing and that are supplied in sheets or reels.

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.

ISO 5636-3, *Paper and board — Determination of air permeance (medium range) — Part 3: Bendtsen method*

ISO 8791-2, *Paper and board — Determination of roughness/smoothness (air leak methods) — Part 2: Bendtsen method*

US ISO 187, *Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples*

US ISO 536, *Paper and board — Determination of grammage*

US ISO 1974, *Paper — Determination of tearing resistance (Elmendorf method)*

US ISO 2470-1, *Paper, board and pulps — Measurement of diffuse blue reflectance factor — Part 1: Indoor daylight conditions (ISO brightness)*

US ISO 2471, *Paper and board — Determination of opacity (paper backing) — Diffuse reflectance method*

US ISO 2758, *Paper— Determination of bursting strength*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Requirements

4.1 Class

The paper shall be one of the following classes (with the specified nominal grammage) as specified by the purchaser:

- i) Class 1: 50 g/m²
- ii) Class 2: 60 g/m²
- iii) Class 3: 70 g/m²; and
- iv) Class 4: 80 g/m²

4.2 Material

4.2.1 General

4.2.1.1 The paper shall be reasonably free from paper dust, small fibre bundles, holes, wood splinters, specks and other defects that may impair its serviceability.

4.2.1.2 The colour of the paper shall be as follows, and in the case of Class 1 and Class 2, as specified by the purchaser:

- i) Class 1 – white or tinted paper;
- ii) Class – white or tinted paper;
- iii) Class 3:- white paper; and
- iv) Class 4 – white paper

4.2.2 Physical properties

4.2.2.1 The physical properties of the paper shall comply with the relevant requirements given in Table 1.

4.2.2.2 The sizing of the paper shall be such that, each side of the paper will accept all common writing media (applied in the normal manner) without undue signs of feathering or spread.

Table 1 — Physical requirements

Property	Requirement				Test method	
	Class 1	Class 2	Class 3	Class 4		
Fibre composition	100 % chemically processed				TAPPI T401	
Grammage, g/m ²					US ISO 536	
Nominal	50	60	70	80		
Actual, min.	45	55	65	75		
Bursting strength, Kpa, min.	100	125	140	150	US 2758	ISO
Tearing resistance (MD), mN, min.	250	350	410	440	US 1974	ISO
Brightness (of white paper), %,	80	80	80	80	US	ISO

min.					2470
Roughness, ml/min, max.					ISO 8791-2
Topside	250	300	300	250	
Wire side	-	400	400	300	
Opacity, %, min.	65	73	78	82	US ISO 2471

4.3 Dimensions

4.3.1 Sheets

4.3.1.1 Sheets shall be of one of the preferred nominal sizes identified by a size designation given in Table 2, or by one of the other size designations specified by the purchaser.

4.3.1.2 The actual width and length of a sheet, measured to the nearest 1 mm with the aid of a metre rule shall conform to the appropriate values given in Table 2 or as specified by the buyer.

4.3.1.3 The sheets shall be so cut that the machine direction (MD) of the paper, relevant to the size designation is parallel to the dimension specified by the purchaser.

Table 2 — Dimensions of sheets of preferred size designation

Size designation	Width, mm	Length, mm
RA0	860 ± 4	1 220 ± 5
RA1	610 ± 4	860 ± 4
A3	297 ± 2	420 ± 2
A4	210 ± 2	297 ± 2
A5	148 ± 1.5	210 ± 2

4.3.2 Reels

4.3.2.1 A reel shall not contain more than one splice, and when a splice is present its position shall be clearly indicated on each side of the reel.

4.3.2.2 The nominal width of a reel shall be one of the widths given in Table 3, as specified by the purchaser, and the dimensions of a reel, when measured with the aid of a steel metre rule in accordance with 5.1, shall conform to the values given in Columns 2, 3 and 4.

Table 3 — Dimensions of reels

Nominal width, mm.	Actual width, mm.	Diameter, mm, .	Internal diameter of core, mm, min.
215	215 ± 50	800 – 1 200	76
320	320 ± 50		
410	410 ± 50		

430	430 ± 50		
480	480 ± 50		
880	880 ± 50		

5 Packaging

5.1 Packaging

5.1.1 Sheets

Sheets shall, unless otherwise specified by the purchaser, be packed flat and wrapped in reams in accordance with commercial practice. Only sheets of the same class, colour and dimensions shall be packed together.

5.1.2 Reels

Paper supplied in reels shall be tightly wound on cores without wrinkling or distortion

5.2 Labelling

5.2.1 Sheets

The following information shall appear in clear and indelible marking on the wrapping of each ream:

- a) manufacturer's name, physical address and/or trademark;
- b) commodity name as, "bond paper";
- c) class and grammage of paper;
- d) colour of paper;
- e) size designation and, when relevant the machine direction of the sheets;
- f) number of sheets in the wrapping;

5.2.2 Reels

The following information shall appear in clear and indelible marking on one side of each reel:

- a) The information specified in 5.2.1 (a) – (d);
- b) nominal width of the reel;
- c) net mass of the paper; and
- d) gross mass of the paper.

Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



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