

DRAFT UGANDA STANDARD

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Bed sheets and pillowcases — 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) and
- (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 and Paper products, Subcommittee SC 1, Textiles and related products.

This second edition cancels and replaces the first edition (US 359:2002), which has been technically revised. The following changes have been made in this second edition:

- Normative references have been updated;
- Requirements for 100% cotton bed sheets have been deleted since they are covered in US EAS 228
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Bed sheets and pillowcases — Specification

1 Scope

This Draft Uganda Standard specifies requirements for woven and knit flat and fitted bed sheets and pillowcases meant for institutional and household purposes.

This standard is not applicable to 100% cotton bed sheets and similar products used in hospitals.

2 Normative references

The following referenced 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.

DUS ISO 105-C12, *Textiles - Tests for colour fastness — Part C12: Colour fastness to industrial laundering*

ISO 5077, *Textiles — Determination of dimensional change in washing and drying*

ISO 12945-1, *Textiles — Determination of fabric propensity to surface fuzzing and to pilling — Part 1: Pilling box method*

ISO 13937-1, *Textiles — Tear properties of fabrics — Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)*

ISO 22198, *Textiles — Fabrics — Determination of width and length*

US ISO 105-B01, *Textiles — Tests for colour fastness — Part B01: Colour fastness to light: Daylight*

US ISO 105-E04, *Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration*

US ISO 105-X16, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing*

US ISO 1833 (all parts), *Textiles — Quantitative chemical analysis*

US ISO 3801, *Textiles — Woven fabrics — Determination of mass per unit length and mass per unit area*

US ISO 8498, *Woven fabrics — Description of defects — Vocabulary*

US ISO 8499, *Knitted fabrics — Description of defects — Vocabulary*

US ISO 13934-1, *Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method*

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>

- 3.1 product unit**
one unit of the final product consisting of the sealed package
- 3.2 lot**
collection of product units of the same type, dimensions and style, which have been manufactured under essentially the same conditions
- 3.3 sample**
portions of the lot, which are drawn for examination or testing purposes
- 3.4 defective**
sample that does not conform to one or more of the specified requirements of this standard
- 3.5 fitted sheet**
product usually made with boxed corners, sometimes elasticized with shape and size to conform to the contours of the mattress and used for covering the mattress on a bed
- 3.6 flannel**
napped fabric used in the fabrication of sheeting products.
- 3.7 flat sheet**
flat, hemmed product, usually rectangular, used for covering the mattress on a bed and used for sleeping on or under
- 3.8 sheet**
large rectangular fabricated product which is used over a mattress on a bed.

NOTE The product may be carded or combed yarn in a wide range of fabric constructions.

4 Requirements

4.1 Fabrics for bed sheets and pillowcases

4.1.1 General requirements

The fabric for the manufacture of bed sheets and pillowcases shall have a knit structure, plain weave or any other weave agreed upon between the manufacturer and the purchaser. The fabric shall be free from any major defects as described in US ISO 8498 or US ISO 8499.

4.1.2 Fibre composition

When tested in accordance with a relevant part of US ISO 1833, the bed sheet or pillowcase shall constitute the fibres indicated on the label.

4.1.3 Specific requirements

The fabric for the manufacture of bed sheets and pillowcases shall conform to the requirements of Table 1 below

Table 1 — Specific requirements for fabrics for bed sheets and pillowcases

Parameters	Requirement				Test Method
	Woven 100% Polyester	Woven Non-flannel Polyester/Cotton	Woven Flannel	Knitted flannel/non-flannel	
Breaking force, N min.					ISO 13934-1
Warp	550	450	360	-	
Weft	250	222	156		
Bursting force, N, min.	-	-	-	222	ISO 13938-1
Mass per unit area, g/m ² , min.	100	120	110	110	US ISO 3801
Tear resistance for both warp and weft, elmendorf, N, min.	7	7	7	NA	ISO 13937-1
Pilling resistance, min.	4.0	4.0	NA	4.0	ISO 12945-1
Dimensional change after washing for both warp and weft, %, max.	± 2	± 5	± 3.5	± 4	ISO 5077
Colourfastness to laundering, min.					DUS ISO 105-C12
Shade change	4	4	4	4	
Staining	4	3	3	3	
Colourfastness to rubbing, min.					US ISO 105-X16
Dry	4	4	4	4	
Wet	3	3	3	3	
Colourfastness to light, min.	5	4	4	4	US ISO 105-B01
Colourfastness to perspiration, min.					ISO 105-E04
Shade change	4	4	4	4	
Staining	4	3	3	3	

4.2 Sewing threads

The fibre composition of the thread used for stitching the fabric on the bed sheets and pillowcases shall be compatible with the bed sheets fabric

5 Make-up

5.1 General

5.1.1 Bed sheets shall be made from single pieces of fabric without any joints.

5.1.2 Pillowcases shall be rectangular, having two long sides and two short sides. The long sides and one short side shall be closed by stitching (except where one such side represents a fold in the fabric). The

unstitched open short side may be provided with a flap, which is folded and sewn inside the pillowcase to form an internal pocket for retaining the pillow when placed inside the pillowcase.

5.1.3 The flap shall be at least 20 cm deep. The flap also acts as a closure when the pillow is inserted in the pillowcase

5.2. Stitches and seams

Hems shall be uniformly and evenly sewn with either lock stitches or over edge chain stitches. The stitches shall have an even tension and there shall not be less than 4 per centimetre.

5.3 Dimensions

When tested in accordance with ISO 22198, the length and width of the bed sheets and pillowcases shall be as declared subject to a tolerance of $\pm 2\%$.

Annex A provides a general guidance to both manufacturers and consumers on selection of appropriate dimensions for bed sheets.

5.4 Side edges

5.4.1 Side edges of bed sheets shall be perfectly trimmed selvages or hems of at least 25 mm width of which 5 mm shall be tucked in before stitching.

5.4.2 Except where there is a selvedge, all free ends of the pillowcase shall be hemmed to a depth of at least 25 mm. The ends shall be tucked in at least 5 mm before the hemming.

6 Packaging and Labelling

6.1 Packaging

6.1.1 Product units

6.1.1.1 Bed sheets and pillowcases may be packed separately or in sets of one or two bed sheets and two matching pillowcases as agreed between the purchaser and the customer.

6.1.1.2 Each sheet shall be folded to a suitable dimension and packed in a clear, cellophane or plastic bag with a cardboard in the middle. Pillowcases shall also be folded and packed with the bed sheets or separately in clear cellophane or plastic bags.

6.1.2 Bulk packages

A quantity of product units may be packed together in appropriate containers, which should adequately protect the contents. Such containers should preferably consist of only bed sheets and/or pillowcases of the same type, dimensions and style.

6.2 Labelling

6.2.1 Unit product labelling

The following information shall appear in legible and indelible marking in print or on a strong, durable label that is firmly sewn on one of the edges of the bedsheets. name of manufacturer or registered trade mark or name , if any;

- a) fibre composition/ blend;

- b) batch/ lot number
- c) dimensions;
- d) country of origin; and
- e) care label.
- f) Bulk labelling

6.2.2 Bulk packages

Each bulk container shall have securely affixed to it a label bearing the following information:

- a) name of manufacturer or registered trade name or mark, if any;
- b) description of product unit, that is , “bed sheets” ” pillowcases” or bed sheets and pillowcases;
- c) number of bed sheets and/or pillow cases in the package
- d) fibre composition;
- e) country of origin.

7 Sampling

7.1 To test the compliance of bed sheets and pillowcases to the requirements of this standard, samples shall be taken according to the sampling plan given in Table 2.

7.2 The lot shall be deemed to comply with the specification if after inspection and testing of the samples taken in accordance with Clauses 4 and 5, no defective is found.

Table 2 — Sampling plan

Number of pieces in the lot	Number of samples to be selected
Up to 100	8
101 - 300	13
301 - 500	20
501 – 1 200	32
1 201 – 3 200	50
3 201 – 10 000	80
Over 10 000	125

Annex A (informative)

Guide for the selection of bed sheets

The dimensions of flat bed sheets depend on the beds and the mattresses they carry. The sizes of beds and mattresses tend to vary over the continent. These thus affect the dimensions of the sheets. This guide has thus been prepared to assist manufacturers of bed sheets and consumers in the selection of bed sheets appropriate to their beds.

A.1 Width of sheets

The width of bed sheets shall be calculated as follows:

$$\begin{aligned} \text{Width of sheet} &= \text{Width of mattress} + (2 \times \text{thickness of the mattress}) \\ &+ 60 \text{ cm (allowing 30 cm of sheet to be tucked under either side of the mattress)} \end{aligned}$$

A.2 Length of sheets

The length of bed sheets shall be calculated as follows:

$$\begin{aligned} \text{Length of sheet} &= \text{Length of mattress} + (2 \times \text{thickness of the mattress}) \\ &+ 60 \text{ cm (allowing 30 cm of sheet to be tucked under either side of the mattress)} \end{aligned}$$

A.3 Example

For a mattress of the following dimensions:

length 180 cm;

width 135 cm;

thickness 15 cm;

the width of the bed sheet shall be:

$$135 + (2 \times 15) + 60 = 225 \text{ cm}; \text{ and}$$

the length of the bed sheet shall be:

$$180 + (2 \times 15) + 60 = 270 \text{ cm}$$

A suitable flat bed sheet to use for such a mattress shall be one of minimum dimensions 225 cm x 270 cm.

Note The only variable element in this determination is the amount of sheet for tucking under the mattress since the dimensions of the mattress are fixed by the mattress manufacturer (or an appropriate national standard). It is thus important for manufacturers to provide enough allowances in the sizes of their sheets to allow for smooth tucking of the sheets under the mattresses.

Bibliography

ASTM D5431 – 08 (Reapproved 2019), *Standard Performance Specification for Woven and Knitted Sheeting Products for Institutional and Household Use*

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Certification marking

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