

# DRAFT UGANDA STANDARD

First Edition  
2014-mm-dd

---

---

**Pillows for domestic use — Specification — Part 1: Synthetic-fibre filled.**

PUBLIC REVIEW DRAFT



Reference number  
DUS 1578-1: 2014

**Compliance with this standard does not; of itself confer immunity from legal obligations**

**A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application**

PUBLIC REVIEW DRAFT

© UNBS 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director  
Uganda National Bureau of Standards  
P.O. Box 6329  
Kampala  
Uganda  
Tel: 256 414 505 995  
Fax: 256 414 286 123  
E-mail: [unbs@infocom.co.ug](mailto:unbs@infocom.co.ug)  
Web: [www.unbs.go.ug](http://www.unbs.go.ug)

# Contents

Page

Foreword .....	iv
<b>1</b> <b>Scope</b> .....	<b>1</b>
<b>2</b> <b>Normative references</b> .....	<b>1</b>
<b>3</b> <b>Terms and definitions</b> .....	<b>1</b>
<b>4</b> <b>Requirements for pillows</b> .....	<b>2</b>
4.1 <b>General</b> .....	<b>2</b>
4.2 <b>Materials and components</b> .....	<b>2</b>
4.2.1 <b>Casing fabric</b> .....	<b>2</b>
4.2.2 <b>Synthetic-fibre filling</b> .....	<b>2</b>
4.2.3 <b>Sewing thread</b> .....	<b>2</b>
4.3 <b>Finished dimensions</b> .....	<b>3</b>
4.4 <b>Construction</b> .....	<b>3</b>
4.5 <b>Stitches and seams</b> .....	<b>4</b>
4.5.1 <b>Stitches</b> .....	<b>4</b>
4.5.2 <b>Seams</b> .....	<b>4</b>
<b>5</b> <b>Packing and marking</b> .....	<b>4</b>
5.1 <b>Packing</b> .....	<b>4</b>
5.2 <b>Marking</b> .....	<b>4</b>
5.2.1 <b>Pillows</b> .....	<b>4</b>
5.2.2 <b>Bulk containers</b> .....	<b>5</b>
<b>Annex A (normative) Inspection and Methods of test</b> .....	<b>6</b>
A.1 <b>Inspection of Pillows</b> .....	<b>6</b>
A.2 <b>Conditioning of pillows</b> .....	<b>6</b>
A.3 <b>Finished dimensions</b> .....	<b>6</b>
A.4 <b>Properties of casing fabrics</b> .....	<b>6</b>
A.4.1 <b>Composition</b> .....	<b>6</b>
<b>Annex B (normative) Determination of mass per unit area</b> .....	<b>7</b>
B.1 <b>Apparatus</b> .....	<b>7</b>
B.2 <b>Procedure</b> .....	<b>7</b>
B.3 <b>Calculation</b> .....	<b>7</b>
<b>Annex C (normative) Resistance to opening at seams</b> .....	<b>8</b>
D.1 <b>Apparatus and materials</b> .....	<b>8</b>
D.2 <b>Sampling and preparation of test specimens</b> .....	<b>8</b>
D.3 <b>Procedure</b> .....	<b>9</b>
<b>Annex D (normative) Determination of fibre length</b> .....	<b>10</b>
H.1 <b>Apparatus and materials</b> .....	<b>10</b>
H.1.1 <b>Polished glass plate with millimetre scale engraved or photographed on it</b> .....	<b>10</b>
H.1.2 <b>Pointed forceps</b> .....	<b>10</b>
H.1.3 <b>White petroleum jelly or liquid paraffin</b> .....	<b>10</b>
H.2 <b>Procedure</b> .....	<b>10</b>
H.2.1 <b>Measure the fibre length of individual fibres on a graduated glass plate</b> .....	<b>10</b>

## Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Tourism, Trade and Industry established under Cap 327, of the Laws of Uganda. UNBS is mandated to co-ordinate 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/SPS Agreements 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 representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

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.

This standard has been developed by the Textiles and textile products' Technical Committee UNBS/TC 7.

PUBLIC REVIEW DRAFT

# Pillows for domestic Use — Specification — Part 1: Synthetic-fibre filled

## 1 Scope

This draft Uganda Standard specifies the requirements and methods of testing for synthetic-fibre filled pillow for domestic use.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

US ISO 3758, Textiles -- Care labelling code using symbols

US ISO 1833-1 Textiles — Quantitative chemical analysis

US ISO 105-C10 Colour fastness to washing with soap or soap and soda

US ISO 105-D01 Colour fastness to dry cleaning using perchloroethylene solvent

FDUS ISO 139, Textiles -- Standard atmospheres for conditioning and testing

US ISO 13934-1, Determination of maximum force using the strip method

US ISO 4915, Textiles — Stitch types — Classification and Terminology

US ISO 4916, Textiles — Seam types — Classification and Terminology

## 3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply

### 3.1

#### **casing**

The textile fabric envelope that contains the filling

### 3.2

#### **filling filler**

The insulating material within the casing of a pillow

### 3.3

#### **gauge (stitch-bond fabric)**

The number of row of stitches per 25 mm width of fabric

**3.4  
outer cover**

A textile fabric envelop that contains a pillow and that is easily removable for cleaning purposes

**4 Requirements for pillows**

**4.1 General**

Pillows shall be

- a) Cut and made with first-class workmanship throughout.
- b) Free from defects that could affect their appearance or their serviceability (or both).
- c) Made such that all seams are smooth and all sewing is free from twists, pleats and puckers
- d) Sufficiently extensible to prevent seam-cracking and undue shrinkage in use.
- e) Made such that all ends of sewing have been trimmed and loose threads removed.
- f) Made such that ends of sewing that are not secured in seams or in other sewing are adequately backstitched.
- g) Made of uniform colour and finish.
- h) Capable of being cleaned in accordance with the care instructions, without giving rise to any defect, such as puckering, lumpiness, tears, etc.
- i) Delivered in a clean and commercially dry condition.

**4.2 Materials and components**

**4.2.1 Casing fabric**

The casing fabric shall either be a woven fabric or a stitch-bond fabric of at least 14 gauge that complies with the appropriate requirements given in Table 1.

**4.2.2 Synthetic-fibre filling**

The synthetic-fibre filling shall, when tested in accordance with US ISO 1833-1 consist entirely of clean, crimped continuous filaments or staple synthetic fibres. The length of staple fibres shall be at least 30 mm. The fibres shall be thermo-bonded or resin-bonded and the blend of melting fibres shall not exceed 30 %.

**4.2.3 Sewing thread**

Any appropriate type of sewing thread may be used, provided that the minimum breaking strength of the thread is at least 8 N.

**Table 1 — Casing fabric requirements**

1	2	3
Property	Requirements	Test methods
Fibre composition, %	Shall comply with the stated composition	US ISO 1833-1

Mass per unit area <sup>a)</sup> , g/m <sup>2</sup> , min.	90	Annex B
Breaking strength <sup>b)</sup> N, min. Warp Weft	350 200	US ISO 13934-1
Resistance to opening at seams <sup>c)</sup> , N, min.	65	Annex C
Colour fastness to: a) Washing <sup>d)</sup> • Change in colour, rating, min. • Staining of transfer cloths, rating, min. b) Dry-cleaning <sup>d)</sup> • Change in colour, rating, min. • Staining of transfer cloths, rating, min.	4 4 4 4	US ISO 105-C10 US ISO 105-D01
<p><sup>a)</sup> As stated on the label (see 5.2.1 b), subject to tolerance of <math>\pm 3\%</math> of the indicated value in the case of blended fabrics.</p> <p><sup>b)</sup> Application to non-woven fabrics only.</p> <p><sup>c)</sup> Applicable to woven fabrics only.</p> <p><sup>d)</sup> Applicable only as indicated by the care instructions (see 5.2.1 d).</p>		

### 4.3 Finished dimensions

Unless otherwise specified, the dimensions of the made-up pillow shall be one of the combinations given in Table 2, Columns 2 and 3. The actual dimensions, determined in accordance with Clause A.3, shall be equivalent to the stated dimensions, subject to the relevant tolerance of  $\pm 3\%$

**Table 2 — Unfilled casing dimensions**

1	2	3
Pillow size	Dimensions, cm $\pm 3\%$	
	Width	Length
Baby (small)	30	40
Medium	45	70
Large	80	80

### 4.4 Construction

A pillow shall consist of a casing made from one piece of fabric (or from two equally sized pieces of fabric) enclosing a synthetic-fibre filling. The mass per unit area of the filling (including the surface stabilizer), tested in accordance with Annex B, shall be at least 1 250 g/m<sup>2</sup> for baby pillows and at least 1 450 g/m<sup>2</sup> for the other sizes.

## **4.5 Stitches and seams**

### **4.5.1 Stitches**

Stitches shall comply with the following requirements according to US ISO 4915

- a) Stitch type:
  - 1) binding: Stitch type 301 or 401;
  - 2) edge-overlocking: Stitch type 505 or 502; and
  - 3) all other stitching: Stitch type 301; and
- b) Number of stitches per 10 cm: At least 24 per 10 cm.

### **4.5.2 Seams**

Seams shall comply with the following requirements according to US ISO 4916

- a) General: Edge-over locked closing seams of seam type SSn-1 shall be of width at least 4 mm. All other seams shall be of width at least 8 mm
- b) Closing seams: Seam type SSc-a, BSc-1, SSa-1, SSav-2 or SSn-1.

## **5 Packing and marking**

### **5.1 Packing**

Unless otherwise required, pillows shall be wrapped individually in a wrapper and then packed in a suitable bulk container. Unless the quantities ordered are such that packing of the same colour of casing and dimensions are not justified, only pillows of the same colour of casing and dimensions and that contain the same type of filling shall be packed together in a bulk container.

### **5.2 Marking**

#### **5.2.1 Pillows**

The following information shall appear in legible and indelible marking on label securely attached to an edge of, or on top (near one of the corners) of each pillow:

- a) the manufacturer's name or trade mark or both;
- b) the dimensions, in centimetres;
- c) the composition of the casing fabric and of the filling, for example; Casing fabric: All cotton; filling polyester fibre;
- d) care instruction will be as per US ISO 3758;
- e) Country of origin.



### 5.2.2 Bulk containers

The following information shall appear in legible and indelible marking on the outside of each bulk container:

- a) the information required in 5.2.1;
- b) a description of the contents;
- c) the quantity of pillows.

PUBLIC REVIEW DRAFT

## **Annex A** **(normative)**

### **Inspection and Methods of test**

#### **A.1 Inspection of Pillows**

After checking for compliance with the relevant requirements given in Clause 4, visually examine each pillow in the sample for compliance with the requirements of 5.2.1

#### **A.2 Conditioning of pillows**

The fabric should be conditioned according to FDUS ISO 139.

After carrying out the test given in Clause A.3, cut from the samples the test specimens required for the test given in Annex B. In the case of the casing fabric, cut from the sample (see Note Clause A.4) the test specimens required for the test given in Clause A.4

#### **A.3 Finished dimensions**

**A.3.1** Lay the pillow flat on a plain surface. Gently pat the pillow (without subjecting it to tension) with the hands until it is free from all storage folds and wrinkles.

**A.3.2** Use an accurately graduated steel tape of length greater than the length of the pillow to determine, to the nearest 1cm, at approximately three equal intervals in each direction, the width and the length of the pillow.

**A.3.3** Calculate the arithmetic mean of each set of measurements and record the results as the width and the length, respectively, of the pillow.

**A.3.4** Check for compliance with 4.3

#### **A.4 Properties of casing fabrics**

**NOTE:** Testing for compliance with the fabric requirements given in table 1 requires a length of at least 1m, full width, of the casing fabric.

##### **A.4.1 Composition**

Determine the composition of casing fabrics by chemical analysis in accordance to US ISO 1833-1

## Annex B (normative)

### Determination of mass per unit area

#### B.1 Apparatus

- B.1.1** Table that has a smooth flat surface and is of a size that exceeds that of the fabric to be measured
- B.1.2** Pair of scissors or suitable cutter that is capable of cutting a square or circular specimen of area 0.01 m<sup>2</sup> to an accuracy of 1 % or better
- B.1.3** Metal plate that is 5 mm smaller than the cutter and that has a thickness of 10 mm.
- B.1.4** Balance that is capable of determining the mass of the specimen to an accuracy of 0.2 % or in the case of 0.01m<sup>2</sup> specimens, to an accuracy of 0.001 g

#### B.2 Procedure

**B.2.1** Ensure that the Fabric, which should preferably be selected from the middle of a piece, is not less than 0.5 m and not more than 4 m long, and lay it flat, and without tension, on the table. Cut at both ends, across the full width of the sample, along parallel lines at right angles to the selvedge. If the mass per unit area of a selvedge on a full-width piece appears to deviate appreciably from the mass per unit area of the body of the fabric, or if so agreed upon between the parties concerned, trim off the selvedge along the outermost threads of the body of the fabric and use only the body of the fabric for the determination of the mass per unit area. Measure the width and length of the specimen.

**B.2.2** Use the balance to determine the mass of the specimen

#### B.3 Calculation

Calculate the mass per unit area  $M$  in grams per square metre, using the following formula.

$$M \approx \frac{m \times 1000000}{l \times w}$$

where,

$m$  is the mass of the specimen, in grams;

$l$  is the length of the specimen, in millimetres; and

$w$  is the width of the specimen, in millimetres.

## Annex C (normative)

### Resistance to opening at seams

#### D.1 Apparatus and materials

**D.1.1** Sewing thread, core-spun with a polyester core and cotton sheath of ticket No. 80 and ticket No. 50 (see Table 1)

**Table D.1 — Requirements for stitching**

1	2	3	4
Mass per area of test specimen g/m <sup>2</sup>	Sewing thread ticket No.	Sewing machine needle size Metric (imperial)	Stitch rating Number of stitches per 10cm
< 250	80	90 (No. 14)	50 ± 2
≥ 250	50	100 (No. 16)	40 ± 2

**D.1.2** Sewing machine needles of size 90 (No. 14) and size 100 (No. 16), examine the points of the sewing machine needle for signs of damage.

**D.1.3** Sewing machine: Electrically operated, single-needle, lock-stitch, capable of producing stitch type 301 and provided with the appropriate throat-plate(s) and feed-dog(s) for use with the sewing threads.

**D.1.4** CRE tensile-strength testing machine, that is capable of constant rate of extension of 100mm/min, fitted with jaws.

**D.1.4.1** Of a type that will not weaken the test specimen during test and such that each jaw has a front face of size 25 mm x 25 mm and a back face of size at least 25 mm x 40 mm. the longer dimension being at right angles to the direction of the applied load.

**D.1.5** Transparent template of size approximately 125 mm x 30 mm ruled with three lengthways and parallel lines, the clear distance between adjacent lines being 3 mm ± 0.05 mm.

#### D.2 Sampling and preparation of test specimens

**D.2.1** Take a laboratory sample as specified in the relevant product specification.

**D.2.3** From the conditioned laboratory sample, cut 10 test specimens each of approximately 200 mm x 75 mm, so that in five of the test specimens the longitudinal yarns are warp yarns and in the other five test specimens the longitudinal yarns are weft yarns.

**D.2.4** Cut the two sets of test specimens so that their longitudinal yarns all represent different threads and, if possible different portions of the warp and the weft respectively. Do not cut any warp-direction test specimen closer to a selvedge than 8 mm.

**D.2.5** Select the sewing thread and the sewing machine needle size appropriate to the mass per area of the test specimen (see Table D.1) and fit the corresponding throat-plate and feed dog to the sewing machine.

**D.2.6** Fold each test specimen in half by placing the two shorter ends together and while maintaining a constantly sewing speed, sew a row of stitches parallel to and at a distance of 15 mm from the fold at the stitch rating (see Table D.1) appropriate, to the mass per area of the test specimen.

**D.2.7** Cut each test specimen on the fold and parallel to the line of stitching so as to provide a seam of width approximately 1 mm.

### **D.3 Procedure**

**D.3.1** Clamp a test specimen symmetrically in the jaws of the CRE tensile-strength testing machine with the seam midway between and parallel to the edges of the jaws so that the free distance between the jaws at the start of the test is 75 mm.

**D.3.2** Hold the transparent template in front of the clamped test specimen so that its centre line is parallel to the line of stitching at the seam of the clamped test specimen and set the CRE tensile-strength testing machine in motion.

**D.3.3** Stop the CRE tensile-strength testing machine and record the load, in newtons, when

**D.3.3.1** Any part of the opening of the seam reaches a width of 6 mm (reduced to 32 mm in the case of test specimens that have warp threads and weft threads of contrasting colours).

**D.3.3.2** A failure owing to the breakdown of the fabric or sewing thread occurs, whichever occurs first

**D.4** Repeat D 3.1 to D 3.3 (inclusive) until all 10 test specimens have been tested.

## **Annex D** (normative)

### **Determination of fibre length**

#### **H.1 Apparatus and materials**

**H.1.1** Polished glass plate with millimetre scale engraved or photographed on it.

**H.1.2** Pointed forceps

**H.1.3** White petroleum jelly or liquid paraffin

#### **H.2 Procedure**

**H.2.1** Measure the fibre length of individual fibres on a graduated glass plate.

**H.2.1.1** Smear the glass plate with a small quantity of the white petroleum jelly or liquid paraffin. Using the forceps arrange a fibre in a straight line on the glass plate and along the scale, keeping it straight by applying a minimum tension at its two extremities. Measure the length of the fibre along the scale. Repeat the operation for each fibre to be tested.

PUBLIC REVIEW DRAFT

## 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.



PUBLIC REVIEW DRAFT

---

---

ICS nn.nnn.nn

Price based on nn pages