# **DRAFT UGANDA STANDARD**

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Textiles — Garments — Part 8: Regular socks and stockings



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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: +256 417 333 250/1/2 Fax: +256 414 286 123 E-mail: info@unbs.go.ug Web: www.unbs.go.ug

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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);
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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 315, Textiles and related products.

# Textiles — Garments — Part 8: Regular socks and stockings

# 1 Scope

This Draft Uganda Standard specifies requirements, sampling and test methods for regular socks and stockings.

This Standard is not applicable to athletic, compression, diabetic and hiking/trekking socks and stockings.

#### 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 105-N02, Textiles — Tests for colour fastness — Part N02: Colour fastness to bleaching: Peroxide

ISO 14362-1, Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres

ISO 2062, Textiles — Yarns from packages — Determination of single-end breaking force and elongation at break using constant rate of extension (CRE) tester

ISO 14362-3, Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene

ISO 16373-1, Textiles — Dyestuffs — Part 1: General principles of testing coloured textiles for dyestuff identification

ISO 16373-2, Textiles — Dyestuffs — Part 2: General method for the determination of extractable dyestuffs including allergenic and carcinogenic dyestuffs (method using pyridine-water)

ISO 16373-3, Textiles — Dyestuffs — Part 3: Method for determination of certain carcinogenic dyestuffs (method using triethylamine/methanol)

US ISO 105-B02, Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

US ISO 105-C10, Textiles — Tests for colour fastness — Part C10: Colour fastness to washing with soap or soap and soda

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

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

US ISO 139, Textiles — Standard atmospheres for conditioning and testing

US ISO 1833 (all parts), Textiles — Binary fibre mixtures — Quantitative chemical analysis

ISO 2859-1, Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

US ISO 7211-5, Textiles — Methods for analysis of woven fabrics construction — Part 5: Determination of linear density of yarn removed from fabric

#### 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

#### foot length

distance from the tip of the toe to the apex of the heel (see Figure 1).

#### 3.2

#### leg length

distance from the top of the socks or stockings to the apex of the heel (see Figure 1).

#### 3.3

#### batch of socks

more than one pair of socks or stockings of the same type and size packed together.

#### 3.4

#### tenacity

ratio of the breaking strength to the linear density of the unstrained specimen, usually expressed in centinewtons per tex.

# 3.5

#### linking

method of joining the toe and in step pieces of stockings or socks by a chain stitch (single or double) that passes through adjacent loops of the same knitted course

# 4 Requirements

#### 4.1 General requirements

## 4.1.1 Socks and stockings construction

- **4.1.1.1** Socks and stockings shall be constructed through a knitting process. These may be plain, rib, fancy or terry knitted structures or their combinations
- **4.1.1.2** The top of the socks and stockings shall be knitted in rib or plain stitches with covered rubber thread or any other suitable elastic yarn laid in.
- **4.1.1.3** The heel and toe portions of the socks and stockings shall be knitted in plain stitches with splicing. The splicing shall be uniform throughout and spliced portions free from creases and/or folds.
- **4.1.1.4** The socks and stockings shall be securely joined at the toe. The joining shall be elastic, smooth and free from lumps and knots.
- **4.1.1.6** The seam shall be sufficiently extensible to prevent cracking and undue shrinkage, and acceptably flat to prevent discomfort

**4.1.1.7** Socks shall be grouped in three categories, i.e. men, women and children.

#### 4.1.2 Freedom from defects

Socks and stockings shall be free from manufacturing defects, such as large mends, irregular ladders, dropped stitches, irregular holes, improper splicing, dyeing defects, blueing agents (if white) and filling materials.

#### 4.2 Specific requirements

#### 4.2.1 Fibre composition

The fibre composition of socks and stockings shall be as declared on the label, subject to a tolerance of  $\pm$  3 % when tested in accordance with a relevant part(s) of US ISO 1833.

#### 4.2.2 Yarn

# 4.2.2.1 Breaking tenacity and elongation

The yarn used in knitting, linking and splicing socks and stockings shall comply with the breaking tenacity and elongation requirements in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Breaking tenacity and elongation requirements of yarns used to knit socks and stockings

Parameter	Type of fibre	Requirement	Test method
Breaking tenacitya,	Nylon	35.0	
g/tex, min.	Polyester	32.0	
	Wool	28.0	
	Acrylic	25.0	ISO 2062
	Cotton	30.0	
Elongation <sup>b</sup> , %, min	Nylon	30.0	130 2002
	Polyester	27.0	
	Wool	20.0	
	Acrylic	17.0	
	Cotton	5.0	

<sup>&</sup>lt;sup>a</sup> The minimum tenacity and elongation at break of blended yarn used to make socks, shall not be less than the values of the fibre component in the blend whose yarn has a lower rating in accordance with Table 1 i.e. in a nylon/wool or polyester/wool blend, the minimum tenacity and elongation at break of the yarn shall not be less than that of the woollen yarn.

## 4.2.2.2 Linear density

The linear density of the yarns used to knit socks and stockings shall be as declared on the label, subject to a tolerance of  $\pm$  10 % when tested in accordance with US ISO 7211-5.

<sup>&</sup>lt;sup>b</sup> The elongation of elastic yarn for the top portion of the socks (if available) shall be greater than 450 %.

#### 4.2.3 Pairing

Socks and stockings shall be matched and paired according to their type of knitted structure, size and shade. A tolerance of  $\pm$  1.25 cm in the leg length and  $\pm$  0.5 cm in the foot length of socks shall, however, be permissible while pairing (See Figure 1)

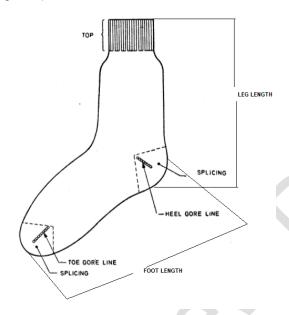


Figure 1 —A typical illustration of a sock

#### 4.2.4 Colourfastness

Dyed socks and stockings shall comply with the colourfastness requirements specified in Table 2.

Colourfastness to Rating, Test method min. Washing Colour change 4 US ISO 105-C10 Staining 4 Perspiration Acid 3 US ISO 105-E04 Alkali 3 Light 5 US ISO 105-B02 Rubbing 4 US ISO 105-X12 Dry Wet 4 Peroxide washing 4 ISO 105-N02

Table 2 — Colourfastness requirements of socks

#### 4.2.5 Restricted colourants

Socks shall be free from listed restricted colourants when tested in accordance with ISO 14362-1, ISO 14362-3, ISO 16373-2 and ISO 16373-3. Colourants on textiles shall be identified and classified in accordance with ISO 16373-1.

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#### 4.2.6 Dimensions

The dimensions of the socks and stockings (foot length and leg length) shall be as declared on the label, subject to a tolerance of  $\pm 2$  % when tested in accordance with Annex A.

# 5 Packaging

- **5.1** Each pair of socks or stockings shall be packaged in such a way so as to avoid soiling and damage during transportation, handling and storage.
- **5.2** A batch of pairs of socks or stockings or several batches shall be placed in a suitable packaging material that shall be secured properly.

# 6 Labelling

# 6.1 Labelling on a pair of socks and stockings

Each pair of socks or stockings shall be labelled with the following information:

- a) manufacturer's name/trade mark and physical address;
- b) fibre composition;
- c) dimensions in mm;
- d) Linear density of the yarn
- e) care instructions; and
- f) country of origin.

# 6.2 Labelling on bulk package

Each package containing a batch of socks or stockings or several batches shall have the following information which shall be legibly and indelibly indicated on the bulk package:

- a) manufacturer's name/trade mark and physical address;
- b) number of pairs in each batch;
- c) total number of batches in the package;
- d) fibre composition; and
- e) country of origin

## 7 Sampling

Sampling shall be done in accordance with ISO 2859-1.

# Annex A (normative)

Measurement of socks dimensions

# A.1 Conditioning of socks

Before foot length and/or leg length dimensions are taken, the socks shall be conditioned in accordance with US ISO 139.

# A.2 Sample sock preparation

Take the conditioned sample sock to be measured. Lay it flat on a smooth table. Remove by hand all creases and wrinkles without stretching the sock.

# A.3 Measurements

With the aid of a metre rule, take the dimensions of both the foot length and leg length as defined in Figure 1, both measurements to be taken correct to the nearest 5 mm.

# **Bibliography**

- [1] DRS 356:2017, Socks Specification
- [2] DKS 583:2020, Socks Specification,

# **Certification marking**

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