

# DRAFT UGANDA STANDARD

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## School wear fabrics — Part 3: Polyester and wool fabrics

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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, [Textile, Leather, Paper and Related products], Subcommittee SC 1, [Textile and Related products].

DUS 1700 consists of the following parts, under the general title School Clothing:

- Part 1: Basic requirements
- Part 2: Blazer fabrics
- Part 3: Polyester and wool fabrics
- Part 4: Polyester and viscose fabrics
- Part 5: Polyester and cotton fabrics
- Part 6: Shirting and blouse fabrics
- Part 7: Fabrics containing textured yarns
- Part 8: Warp knitted fabrics

# School wear fabrics — Part 3: Polyester and wool fabrics

## 1 Scope

This part of DUS 1700 covers the requirements for polyester-and-wool fabrics suitable for use in the manufacture of school clothing

## 2 Normative references

The following referenced documents 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 1789, *Standard Test Methods for Quantitative Analysis of Textiles*

DUS ISO 137, *Wool — Determination of fibre diameter — Projection microscope method*

DUS ISO 3998, *Textiles — Determination of resistance to certain insect pests*

DUS ISO 9073-1, *Textiles — Test methods for nonwovens — Part 1: Determination of mass per unit area*

DUS ISO 12945-3, *Textiles — Determination of the fabric propensity to surface pilling, fuzzing or matting — Part 3: Random tumble pilling method*

DUS ISO 13935-1, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 1: Determination of maximum force to seam rupture using the strip method*

DUS ISO 13935-2, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 2: Determination of maximum force to seam rupture using the grab method*

US 441-2/ISO 7211-2, *Textiles — Woven fabrics — construction — Methods of analysis — Part 2: Determination of number of threads per unit length*

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 1833-1, *Textiles — Quantitative chemical analysis — Part 1: General principles of testing*

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

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

US ISO 13934-1, *Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force*

### 3 Requirements

#### 3.1 General

The fabric shall

- a) comply with the basic requirements given in DUS 1700-1;
- b) have been made from two-ply yarns;
- c) have a clear-cut finish; and
- d) be dyed and, when so required (see A.1), also have a moth-resistant finish.

#### 3.2 Fabric

The fabric shall comply with the relevant requirements given in table 1.

#### 3.3 Moth resistance

The fabric shall comply, when relevant and when tested in accordance with the requirements for DUS ISO 3998

#### 3.4 Defects

The assessment and stringing of defects, in terms of 4.8 of DUS 1700-1, shall be based on the following LAQ's:

- a) For pieces: 10
- b) For a lot: 8

**Table 1—Fabric requirements**

1	2	3
Property	Requirement	US number (unless otherwise indicated)
<b>Composition, %</b> Polyester, min Wool, max	50 50	US ISO 1833-1
<b>Wool fibre diameter</b> , mean, $\mu\text{m}^a$	22 or 26	DUS ISO 137
<b>Weave</b>	Twill	Visual examination
<b>Breaking strength</b> , N, min Warp weft	900 750	US ISO 13934-1
<b>Seaming properties</b> (after washing)		DUS ISO 13935-1 and

<b>Resistance to opening at seams, N, min<sup>b</sup></b>	150	DUS ISO 13935-2
<b>Seam strength, N, min<sup>b</sup></b>	165	
<b>Ply of yarns</b> Warp weft	2 2	Visual examination
<b>Resistance to pilling, Rating, min</b>	3-4 (i.e. slight to moderate)	DUS ISO 12945-3
<b>Non-fibrous material content, %, max</b>	2.5	DUS 1789
<b>Dimensional changes on washing, %, max</b> Warp Weft	3 3	US ISO 5077
<b>Colour fastness to:</b> <b>Washing, rating, min:</b> Change in colour Staining of transfer cloths <b>Perspiration, rating, min:</b> Change in colour Staining of transfer cloths <b>Rubbing, rating, min:</b> Dry Wet <b>Light, rating, min</b>	4 3-4 4 3-4 4 3-4 5	US ISO 105-C10 US ISO 105-E04 US ISO 105-X12 US ISO 105-B02
a. Subject to a tolerance of $\pm 5\%$ .		
b. Both warp and weft directions		

#### 4 Packing, labelling, marking and inspection

The relevant clauses of DUS 1700-1 shall apply (see A.1).

**Annex A**  
(Normative)

**Note to purchasers**

**A.1** The following requirements shall be specified in tender invitations and in each order or contract:

- a) the colour (see 3.1, and also 4.7 of DUS 1700-1);
- b) when relevant, that the fabric shall have a moth-resistant finish (see 3.3);
- c) when relevant, a particular percentage fibre blend (see table 1);
- d) the method of packing, if other than specified (see 6.1 of DUS 1700-1); and
- e) additional marking, if required (see 6.3 of DUS 1700-1).

**A.2** The following requirements shall be agreed upon between the purchaser and the supplier:

- a) the acceptance of split or fringe selvages (see 4.3 of DUS 1700-1); and
- b) the fabric width (see 4.4 of DUS 1700-1)

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**Annex B**  
(Informative)

**Recommended end use**

A fabric that complies with the requirements of this part of DUS 1700 is suitable for use in the manufacture of boys' trousers and shorts, girls' dresses, tunics and gyms, and girls' slacks and skirts

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## Annex C (Informative)

### Guide to manufacturers and purchasers

The fabric types given in table C.1 have been found suitable for use in the manufacture of polyester-and-wool school clothing.

**Table C.1 — Suitable fabric types**

1	2	3	4
Property	Requirement		US number (unless otherwise indicated)
	Type <sup>a</sup>		
	SK45	SK51	
<b>Composition, %</b> Wool Polyester	55±5 45±5		US ISO 1833-1
<b>Weave</b>	2/2 "Z" twill		Visual examination
<b>Mass per unit area (free from non- Fibrous material), g/m<sup>2</sup>, min</b>	230	240	US ISO 3801/DUS ISO 9073-1
<b>Number of threads per cm, min.</b>			US 441-2/ISO 7211-2
Warp	24	26	
Weft	21	23	
<small>a Designation by the type number is restricted to fabrics that comply with the above requirements</small>			

## 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.

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