ETHIOPIAN STANDARD

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Textile –school wear fabrics Part -1: Student's Trouser, Vest & skirts fabric Specifications

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Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Textile-Fabrics (TC 70) and published by the Ethiopian Standards Agency (ESA).

In preparing this Ethiopian Standard reference has been made to the following:

ARS 1567: 2017 School wear fabrics — Basic requirements published by Afrian Regional Organization for Standardization (ARSO)

Acknowledgement is made for the use of information from the above publication.

Textile –school wear fabrics
Part -1: Student's Trouser, Vest & skirts fabric Specifications

1. Scope
This Ethiopian Standard specifies material and performance requirements for student's Trouser, Vest & skirt fabrics suitable for school uniforms.

2. Normative reference
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.

ES IS 11827 textiles - composition testing - identification of fibers

ES ISO 1833-1 &11, Textile- Quantitative chemical analysis part 11: Mixtures of cellulose and polyester fibers (method using sulfuric acid)

ES ISO 7211-1, Textiles – Woven fabrics – construction – Methods of analysis – Part 1: Methods for the presentation of a weave diagram and plans for drafting denting and lifting.

ES ISO 7211-2, Textiles-Woven fabrics-Constructions- Methods of analysis part 2: determination number of threads per unit length

ES ISO 3801, Textiles -Woven fabrics-Determination of mass per unit length and mass per unit area ES ISO 13934-1, Textiles -Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip me.

ES ISO 13937-1, Textiles- Tear properties of fabrics- Part 1: Determination of tear force using ballistic pendulum method.

ES ISO 3071, Textiles — Determination of pH of aqueous extract

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

ES ISO 105-X12, Textiles — Tests for colour fastness — Part C12: Colour fastness to rubbing

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

ES ISO 9867 Textiles - evaluation of the wrinkle recovery of fabrics — appearance method

ES ISO 12945-2Textiles — determination of fabric propensity to surface fuzzing and to pilling — part 2: modified Martindale method

ES ISO 12947-3 Textiles — Determination of the Abrasion Resistance Of Fabrics By The Martindale Method — Part 3: Determination Of Mass Loss

3. Definition
For the purpose of this standard the definition ES 6265 shall be applied.

4. Requirements

4.1 General Requirements

The fabric shall be well singed.

4.1.1 Have been made in accordance with sustainable textile production ES 6702.

4.1.2 Be of acceptable uniform make, width, colour(s), and finish,

4.1.3 Be delivered in a clean and commercially dry condition.

4.2 Specific requirements

4.2.1 Blend composition of the fabric shall conform to the requirements given in Table1.

4.2.2 The fabric shall comply with the requirements specified in Table1.

Table 1:-Technical requirements for Trouser, Vest & skirt fabrics

S.N	Characteristics	Requirement	Method of Test
1.	Fibers/material composition in %		
2.	polyester	65±5	ES ISO 1833-11
	Cotton/Viscose	35±5	
3.	Fabric structure	1/1Plain	ES ISO 7211-1
4.	Yarn count in Ne		ES ISO 7211-5
	• Warp	20±4	
	• Weft	20±4	
5.	Grammage (GSM), g/m^2	180+/-10	ES ISO 3801
6.	Tensile strength @ break in N, min		ES ISO 13934-1
	• Warp way	1000	
	• Weft way	800	
7.	Tear strength in N , *Min*	25	ES ISO 13937-1
8.	Dimensional stability (After3 washes) in %, max		ES ISO 6330
	• Warp way	3	
	• Weft way	3	
9.	Wrinkle recovery min	4-5	ES ISO 9867
10.	PH Value of fabric	6.0-8.0	ES ISO3071
11.	Color fastness to Light (change in color) min	5	ES ISO 105-B02
12.	Color fastness to Washing min		ES ISO 105-C10
	• Change in color	4	
	• Staining of adjacent fabric	4	
13.	Color fastness to Perspiration (acidic and alkaline) min		ES ISO 105-E04
	• Change in color	4	
	• Staining of adjacent fabric	4	
14.	Color fastness to Rubbing ,min		ES ISO 105-X12
	• Dry	4	
	• Wet	3-4	
15.	Pilling resistance @5000 rubs*Min*	3-4	ES ISO 12945-2:2
16.	Abrasion Resistance/5000rubs/ max	5	ES ISO 12947-3
17.	Fabric drape ability in % max	50	ES ISO 9073-9

5. Packaging, Labeling and Marking

5.1. Packing

Unless otherwise required, each piece shall be rolled, full-width and face inward, on an acceptable tube. Only pieces of the same type, width, design (when relevant), colour(s) and finish shall be packed together in a bulk container and shall be comply with ES 6700.

5.2. Labeling & Marking

The cloth shall be marked with the following information:

a) Name of the material
b) Composition, namely, polyester in percent and cotton/viscose in percent
c) Length and Width
d) Indication of manufacturer name

Annex A

(Normative)

List of Common Flaws/Defects

One or more ends missing in the body of the material throughout its length, more than three ends missing at a place and running over 60 cm, or prominently noticeable double end running throughout the piece. Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece.

Smash definitely rupturing the texture of the fabric.

Hole, cut or tear.

Reed marks prominently noticeable over a length exceeding5 percent of the piece.

Defective or damaged selvedge noticeable over a length exceeding 5 percent of the length of the piece.

Weft crack or two or more is missing picks across the width of the fabric.

Warp or Weft bar due to the difference in raw material, count, twist, luster, colour, shape or spacing of adjacent groups of yarns (starting mark

Notice able oil or other stain in the fabric.