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**Textiles- Cotton poplin -
Specification**

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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:
IS 188: 2004 Textiles—Cotton poplin—Specifications; published by Bureau of Indian Standard (BIS)

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

DRAFT STANDARD

Textiles—Cotton Poplin—Specification

1. SCOPE

This Ethiopian standard specifies the requirements of three varieties of cotton poplin, bleached or dyed.

This standard does not specify general appearance, feel, shade, etc, of the cloth.

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.

ES 274 Textiles – Estimation of moisture, total size or finish, ash and fatty matter in grey and finished cotton textile materials

ES 6700 Code for inland packaging of manmade or cotton fiber yarn and fabrics

ES 6702 Guideline for Sustainable Textile Production

ES ISO105-C10 Textiles — Tests for Colour Fastness — Part C10: Colour Fastness to Washing with Soap or Soap and Soda

ES ISO 105-E04, textiles - tests for colour fastness -part e04: colour fastness to perspiration

ES ISO 3071, textiles — determination of ph of aqueous extract

ES ISO 3801, textiles -woven fabrics-determination of mass per unit length and mass per unit area

ES ISO 7211-2, textiles-woven fabrics-constructions-methods of analysis part 2: determination number of threads per unit length

ES 127, yarns-determination of breaking load and elongation by the single strand method

ES ISO 105-B06, textiles — tests for colour fastness —part b06: colour fastness and ageing to artificial light at high temperatures: xenon arc fading lamp test

ES ISO 7771, textiles - determination of dimensional changes of fabrics induced by cold - water immersion

ES ISO 6938 Textiles — Natural fibres Generic names and definition

ES 6583 Code of Practice for Grading of Textile Fabrics

3. Terms and Definition

For the purpose of this standard the definition in ES ISO 6938 and the following definition shall apply.

3.1. Yarn

The yarn used in the manufacture of the poplin shall be satisfactory in evenness and reasonably free from neps and spinning defects.

3.2.**Cloth**

The cloth shall be free from dressing and filling materials and from substances liable to cause subsequent tendering. The cloth shall be mercerized.

3.2.1. The bleached cloth shall have a full bleached finish. Chlorine bleach shall not be used for the purpose. The fabric, if dyed, shall be free from banned dyes, banned chemicals and heavy metals.

NOTE — The cloth shall be free from blueing or optical whitening agents, if required by the buyer.

4. REQUIREMENTS**4.1. General Requirements**

4.1.1. The cotton poplin shall be free from internationally banned chemicals (manufacturing restricted substance list (MRSL)).

4.2. Specific requirements**4.2.1. Constructional Particulars**

The cloth shall conform to the requirements given in Table 1. However, in case of agreement, the nominal constructional parameter shall be as agreed to between the buyer and the seller subject to the tolerances specified in Table 1.

Table 1 Constructional Particulars of Cotton poplin

Sl	Variety	Count of Yarn		Ends/cm	Picks/cm	Mass	Breaking Load		Length	Width	Weave
No	No	Cotton Count (Tex)				g/M2	5.0x20 cm Strips,				
		Fot Guidance Only					Warp	Weft			
		Warp	Weft				N(kgf)	N(kgf)	m	cm	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	1	100s/ 2	100s/ 2	60	28	110	532 (54)	306 (31)	36 or above as agreed	91 or above as agreed	Plain
ii)	2	60s/2	60s/2	43	22	135	710 (72)	355 (36)			
iii)	3	40s	40s	54	28	125	621 (63)	325 (33)			
Tolerance %		-	-	+5	+5	+5	Minimum	Minimum	—	±2	—
Test Method		ES ISO 7211-5	ES ISO 7211-5	ES ISO 7211-2	ES ISO 7211-2	ES ISO 3801	ES ISO 13934-1	ES ISO 13934-1	ES ISO 22198	ES ISO 22198	ES ISO 7211-1

4.2.2. The colour fastness and other requirements of the cloth shall be as given in Table 2.

Table 2 Other Requirements of Cotton Poplin

SI No	Characteristics	Requirement	Method of Test
(1)	(2)	(3)	(4)
i)	Colour fastness (in vase of dyed and printed fabric) to:		
	a) Light	5 or better	ES ISO 105-B-07
	b) Washing: Test 4	4 or better	ES ISO 105 –C-10
	c) Perspiration	3 or better	ES ISO 105-E-04
ii)	Scoring loss, percent, Max	2	
iii)	PH value	6.0 to 8.0	ES ISO 3071
iv)	Dimensional Change on soaking in water, percent, Max	3	ES ISO 23231, ES ISO 6330
v)	Barium activity number	120, Min	

4.2.3. The cloth when visually examined for serious and major flaws as categorized ES 6583.

4.2.4. Sealed Sample

If, in order to illustrate or specify the indeterminable characteristics, such as general appearance, luster, feel and shade of the cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

4.2.4.1. The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

5. Marking

5.1. The cloth shall be marked with the following:

- Name of the material;
- Length and width of the piece;
- Manufacturer's name, initials or trade-mark, if any; and
- Month and year of manufacture.

5.1.1. At the other end of the piece, the cloth shall be marked with an identification mark.

6. Packing

The cloth shall be packed in bales or cases comply with ES 6700

7. SAMPLING

7.1. The scale of sampling and criteria for conformity as given in Annex A shall be followed in respect of the physical characteristics, namely, ends and picks, mass, breaking load, length and width of the cloth.

Annex A
(Normative)

Sampling

A.1 The pieces shall be sampled from each lot for determination of physical characteristics. In order that the pieces selected are representative of the lot, they shall be distributed over the bales in the lot. Unless otherwise agreed to between the buyer and the seller, the number of bales to be taken from a lot for the purpose shall depend upon the size of the lot and be in accordance with Table 2.

TABLE 2 NUMBER OF BALES TO BE CHOSEN FROM A LOT

Lot Size	No. of Bales to be Selected
2 to 8	2
9 to 15	3
16 to 25	5
26 and above	8

A.2 The bales shall be selected at random from the lot and in order to ensure the randomness of the selection of the bales the following procedure may be adopted.

A.2.1 A set of random numbers from 1 to 100 is given in Table 3. Any one numeral shall be selected at random from the table. Starting from the selected numeral and continuing on with the numerals in any direction, right or left, up or down, the succeeding numerals shall be copied out one by one till the number of numerals is equal to the number of bales to be chosen. The numerals which are greater than the size of the lot or which have already occurred shall be omitted. The numerals noted down in this manner shall be arranged in the ascending order of magnitude.

TABLE 3 RANDOM NUMBER TABLE

81	74	67	95	70	56	51	54	50	53
61	37	42	62	93	96	34	18	22	88
52	07	16	29	39	04	71	14	76	78
43	08	77	25	72	49	86	03	83	45
65	32	27	40	63	57	97	84	82	87
21	58	11	23	80	10	30	01	100	44
31	90	55	88	13	36	24	91	19	64
73	98	20	05	68	46	69	85	94	59
33	15	35	26	79	92	38	12	41	17
75	66	99	09	06	47	48	60	28	02

A.2.2 Starting from any bale in the lot and counting them in one order, the bales corresponding to numerals already noted down shall be selected from the lot for drawing samples. 4.3 From each selected bale approximately equal number of pieces shall be chosen at random.

A.2.3 The minimum number of pieces to be selected from any bale shall be determined by dividing the number of tests to be conducted (see Table 1) by the number of bales selected (see Table 2). If it comes out to be a fractional number, its maximum integral part (say l) shall be taken and l or $(l + 1)$ pieces shall be chosen from each selected bale so as to get the requisite number of pieces for tests. In case the minimum number tests happens to be five and the number of bales selected to be eight, one or more pieces shall be taken from each bale so as to get ten pieces for test purposes.

A.3 From each of the pieces selected, one test specimen shall be taken for determining the various characteristics. While drawing the test specimen's care shall be taken to exclude a suitable length from both ends of the piece.

A.4 The test specimens thus subjected shall be subjected to relevant tests for determining the different characteristics.

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- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

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