

TANZANIA STANDARD

(2nd Revision).

Textiles - Cotton drills – Specification

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(draft for comments only)

O. FOREWORD

This (2nd revision) Tanzania standard has been prepared in order to guide manufacturers and consumers of cotton drills meant for industrial garments and uniforms for various uses.

In the preparation of this Tanzania standard assistance was derived from company standards established by Tanzania textile industries and IS: 177-1977, *Specification for cotton drills* published by the Indian Standards Institution.

For the purpose of deciding whether a particular requirement of the standard is complied with, the final value, observed or calculated, expressing the result of a test shall be rounded off in accordance with TZS 4:1979 (see clause 2).

1. SCOPE AND FIELD OF APPLICATION

1.1 This Tanzania Standard prescribes constructional details and other particulars of five varieties of cotton drills.

1.2 The five varieties of cotton drills are suitable for making industrial garments and uniforms for schools, prisons, army, police etc. A guidance for construction requirements is given in the annex.

1.3 This Tanzania standard does not specify general appearance, feel, shade etc. of the cloth (see 4.3).

2 REFERENCES

For the purpose of this Tanzania standard, the following references shall apply:

- a) TZS 3:1979 - Atmospheric conditions for testing.
- b) TZS 4: 1979 - Rounding off numerical values.
- c) TZS 20:1981 - Textiles - Woven fabrics - Determination of the number of threads per unit length.
- d) TZS 21:1979 - Textiles - Woven or knitted fabrics - Determination of mass per unit length and per unit area.
- e) TZS 23: 979 - Textiles - Tests for colour fastness - Colour fastness to light: Xenon arc.
- f) TZS 22:1979 - Woven fabrics - Determination of breaking load and extension.
- g) TZS 24:1979 - Textiles - Tests for colour fastness - Colour fastness to washing: Test 4.

- h) TZS 26:1981 - Textiles - Determination of conductivity, pH, water soluble matter, chloride and sulphate in aqueous extracts.
- i) TZS 40:1979 - Textiles - Tests for colour fastness - Colour fastness to light: Daylight.
- j) TZS 44:1979 - Textiles - Woven or knitted fabrics - Determination of length and width.
- k) TZS 137:1981 - Textiles - Determination of dimensional change of woven and knitted fabrics and garments - machine method.
- l) TZS 138: 1981 - Textiles - Tests for colour fastness - Colour fastness to rubbing
- m) TZS 139: 1981 - Textiles - Determination of the linear density of yarn removed from fabric free from added matter.
- n) TZS 167: 1983 - Textiles - Tests for colour fastness - Colour fastness to washing Test 3.
- o) TZS 280: 1986 - Textiles - Tests for colour fastness - Colour fastness to perspiration.
- p) TZS 412: 1989 - Textiles - Method of test for abrasion resistance of fabrics.
- q) TZS 347: 1988 - Textiles - Grey cotton yarns - Specification.

3 MANUFACTURE

3.1 Yarn - The cotton yarn used in the manufacture of the cloth shall be satisfactory in evenness and reasonably free from neps and spinning defects, and shall meet the requirements given in clause 4 of TZS 347: 1988 (see clause 2).

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

3.2.1 The cloth shall be dyed with suitable dyes to shades agreed to between the buyer and the manufacturer.

3.2.2 The bleached cloth shall have a full bleached finish and shall be free from bluing/whitening agents, unless desired by the buyer.

3.2.3 The cloth shall be mercerized and pre-shrunk. The finish of the cloth shall be as agreed to between the buyer and the manufacturer.

4 REQUIREMENTS

4.1 The constructional particulars of the cloth shall be agreed between the buyer and the seller from the five varieties of cotton drills.(Table 2 can be used as a guidance).

4.2 The colour fastness ratings and other requirements of the cloth shall conform to those given in Table1.

TABLE1.- Colour fastness Other requirements of cotton drills.

Characteristics	Requirements	Methods of test (see clause 2).
1) Colour fastness to Light	6	TZS 23:1979 } (See clause 2) TZS 40:1979 }
WASHING Change of shade Staining of adjacent fabric	4 4	} TZS 24:1979
ACID AND ALKALINE PERSPIRATION. Change of shade, Staining of adjacent fabric	4 4	} TZS 280: 1986
RUBBING Dry Wet	4 3 - 4	} TZS 138: 1981
2) pH value	6.0 – 8.5	TZS 26: 1981
3) DIMENSIONAL CHANGE Warp way; Weft way:	} ± 2%	TZS 137: 1981
4) Abrasion resistance Cycles per Min.	22000	} TZS 412: 1989
5) Length: in metres 6) Width: centimetres	Manufacture and buyer agreement	TZS 44: 1979

NOTE: Length and width specified relates to the specific state of finish in which the fabric is derived.

Table 2. – Construction particulars of cotton drills. (see clause 4.1).

VARIETY No	Count of yarn (Nm)		Number of threads per centimeter		Mass in g/m ²	Breaking strength 5cmx20cm strip N, Min		Weave
	Warp	Weft	Warp	Weft		Warp	Weft	
1	17 (59tex)	17 (59tex)	32 ± 2	18 ± 1	⁺⁵ 325 ₋₂	1200	700	Twill
2	22 (45tex)	22 (45tex)	36 ± 2	21 ± 1	⁺⁵ 270 ₋₂	1280	780	Twill
3	34 (30tex)	34 (30tex)	48 ± 2	24 ± 1	⁺⁵ 250 ₋₂	950	450	Twill
4	20/2 (50x2tex)	20/2 (50x2tex)	18 ± 2	19 ± 1	⁺⁵ 395 ₋₂	1650	1450	Twill
5	45/2 (22x2tex)	45/2 (22x2tex)	25 ± 2	22 ± 1	⁺⁵ 250 ₋₂	700	500	Twill
Methods of Test (see clause 2).	TZS139: 1981		TZS 20:1981		TZS 21:1979	TZS 22:1979		Visual

4.3 Standard patterns

4.3.1 Buyer and seller shall agree upon standard patterns

4.3.2 These standard patterns shall then be the reference for such characteristics as shade, handle, appearance and any other characteristics not specified in this Tanzania Standard.

5 MARKING

5.1 The cloth shall be marked with the following:

- a) name of the material;
- b) manufacturer's name or initials and/or trade mark, if any;
- c) length and width of the piece and
- d) production lot or batch number

5.2 The cloth shall also be marked with the TBS Standards Mark.

NOTE - The TBS Standards Mark shall be used by manufacturers only under license from TBS. Particulars of conditions under which the licenses are granted shall be obtained from TBS.

5.3 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 in conformity with the procedures agreed upon between the buyer and the manufacturer,

7 SAMPLING FOR INSPECTION AND TESTING

Buyer and seller shall agree upon acceptable quality levels, and the scale of sampling shall be sufficiently adequate to ensure conformity to the agreed quality levels.

Table 3 - Sampling size and permissible number of non-conforming pieces

Number of pieces in the lot	Sample size (No. of pieces to be selected)	Permissible no. Non-conforming pieces	Sub-sample size (No. of pieces to be selected)
Up to 25	3	0	2
26 to 50	5	0	2
51 to 150	8	0	3
151 to 300	13	1	3
301 to 500	20	1	5
501 to 1000	32	2	5
1001 and above	50	3	8