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Textiles – Upholstery fabric Specification

**Draft for stakeholders comments only!**

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## Textiles – Upholstery fabric specification

### Foreword

This 2<sup>nd</sup> Edition Draft Tanzania Standard is meant for helping manufacturers and producers in manufacturing different types of upholstery fabric materials.

In preparation of this Draft Tanzania Standard assistance was derived from;

*ASTM - 04771/ D4771M-09, Standard performance specification for knitted upholstery fabrics for indoor furniture.*

*SANS 1324: 2006, Upholstery fabrics*

This second edition cancels and replaces the first edition TZS 1423: 2011 Textiles — Knitted upholstery fabrics — Specifications, for indoor furniture.

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## 1. Scope

1.1 This draft Tanzania Standard specifies the requirements for upholstery fabrics of woven, knitted, flocked-pile, and velour types (all of which may be latex-backed) suitable for use in the manufacture of upholstered furniture for contract or domestic use, and which can also be used in the manufacture of movable office partitions, Polyvinyl chloride (PV) coated fabric and Polyurethane (PU) coated fabrics

1.2 This standard does not cover Long pile fabrics.

## 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.

- a) *TZS 4 Rounding off numerical values.*
- b) *TZS 20 Textiles: Woven fabrics Determination of the number of threads per unit length.*
- c) *TZS 21 Textiles: Woven or knitted fabrics - Determination of mass per unit length and - per unit area.*
- d) *TZS 22 Textiles: Woven fabrics Determination of breaking load and extension.*
- e) *TZS 23 Textile: Tests for colour fastness, -Colour fastness to light: Xenon arc.*
- f) *TZS 24 Textiles: Tests for colour fastness – Colour fastness to washing: Test 4.*
- g) *TZS 26 Textiles: Determination of conductivity, pH, water-soluble matter, chloride and sulphate in aqueous extracts.*
- h) *TZS 27 Textiles: Determination of dimensional changes of fabrics by cold water immersion.*
- i) *TZS 40 Textiles: Tests for colour fastness – Colour fastness to light: Daylight.*
- j) *TZS 44 Textiles: Tests Woven or knitted fabrics- Determination of length and width.*
- k) *TZS 137 Textiles: Determination of dimensional change of woven and knitted fabrics and garments: Machine method.*
- l) *TZS 138 Textiles: Test for colour fastness to rubbing.*
- m) *TZS 529 Textiles: Test for colour fastness to dry cleaning.*
- n) *TZS 139 Textiles: Determination of the linear density of yarn removed from fabric free from added matter.*
- o) *TZS 249 Textiles: Woven or knitted fabrics-determination of bow and skewness.*
- p) *TZS 531: 1995, Textiles — Tests for colour fastness — Colour fastness to spotting by water*
- q) *TZS 530: 1995, Textiles — Test for colour fastness — Colour fastness to rubbing organic*

## 3 Terms and definitions

For the purposes of this Draft Tanzania standard, the following definitions shall apply.

### 3.1 Contract furniture

Manufactured for use in non-house hold application.

### 3.2 Furniture covering

A general term for furniture being covered by upholstery fabric.

### 3.3 Upholstery fabric

The exterior fabric covering a furniture unit.

### **3.4 Knitted fabric**

Fabric manufactured by intermeshing of loops (interloping) of yarns.

### **3.5 Skewness**

Cloth condition in which the warp and weft or wale and course yarns are not at right angle to each other.

### **3.6 Long pile fabric**

Upholstery fabric that has a pile of length not less than 5 mm.

## **4 Manufacture**

### **4.1 General**

**4.1.1** The fibre used in the manufacture of upholstery fabrics shall be of the required quality to ensure that the fabric complies with the requirements of this Draft Tanzania Standard.

**4.1.2** The upholstery fabric used in the manufacture of indoor furniture shall be free from dressing and filling materials and from substances liable to cause subsequent tendering.

### **4.2 Construction and Composition**

#### **4.2.1 General**

The construction and the fibre composition of an upholstery fabric shall be as agreed upon.

#### **4.2.2 Construction**

The following requirements regarding the structure of the fabric shall be agreed upon:

- a) the weave or knitted structure;
- b) the mass per unit area; and
- c) the number of threads per unit length or the number of wales and courses per unit length.

#### **4.2.3 Performance requirements**

An upholstery fabric shall comply with the requirements given in Table 1 and Table 2.

### **4.3 Fusion**

Verify the state of fusion of the coating to the base fabric in accordance with ISO 6451. Stop testing if the components are not fused together satisfactorily.

### **4.4 Colour, embossing, grain and finish**

The quality of the colour, embossing, grain and finish of the coated fabric, whether the material is plain or multi-coloured, shall be subject to agreement between the customer and supplier. This agreement shall be based on a reference sample, and on illustrations or other ways of indicating acceptable deviations from the reference sample.

## 5 REQUIREMENTS.

5.1 It should be recognized that fabric can be produced utilizing almost an infinite number of construction variables (Type of fibre, percentage of fibre, yarn twist, yarn number, warp and weft count, chemical and mechanical finish).

5.2 It should also be recognized that fashion and aesthetics dictate the ultimate consumer to find an acceptable article made from fabrics that do not conform to all of the requirements in Table 1.

5.3 Hence, no single performance specification can possibly apply to all the various fabrics that could be utilized for this end use.

5.4 The supplied consignment shall be in conformity with the sample agreed upon the buyer and seller.

5.5 Fabrics intended for household curtains and drapery fabrics shall comply with all the requirements in Table 1.

**Table 1 – Performance Requirements for un coated fabrics**

SN	Characteristics	Requirements			Test Methods Test Methods
		Contract upholstery fabric	Domestic upholstery fabric	Office partitions	
1	Breaking strength, N, min. (woven fabrics only) a) Velour fabrics b) Other fabrics	300 400	300 400	150 200	TZS 22
2	Bursting strength, kPa, min. (knitted fabrics only)	5 0 0	500	250	TZS 22
3	Resistance to flat abrasion a) Rubs to end point, min. b) Change in shade after 4,000 rubs, rating, min	25,000 4	10,000 4	-	TZS 412
4	Dimensional changes to washing or dry-cleaning (or both), %, max. a) Warp/wale direction b) Weft/course direction	3 2	3 2	-	TZS 137
5	Colour fastness to rubbing a) Dry, min b) Wet, min	4 4	4 4	3 3	TZS 138
6	Colour fastness to dry cleaning; Shade change, min	4	4	-	TZS 529
7	Colour fastness to light ,min	3	3	4	TZS 40

8	Colour fastness to washing, min a) Change in colour b) Staining on transfer clothes	4 4	4 4	-	TZS 24
9	Colour fastness to rubbing with organic solvents a) Dry, min b) Wet, min	4 4	4 4	3 3	TZS 530
10	Colour fastness to spotting by water, min	4	4	3	TZS 531
11	Colour fastness to perspiration, min	4	4	3	TZS 280

**Table 2 – Performance Requirements for coated fabrics**

SN	Property	Requirements			Test method
		PVC coated knitted fabric	PVC coated woven fabric	Pu coated woven fabric	
1	Total mass of coating per unit area (g/m <sup>2</sup> ), min	480	420	300	TZS 21
2	Thickness of coated fabric (mm), min	0.68	0.4	-	ASTM 3767 - 03
3	Tensile strength (N), min a) Longitudinal b) Transverse	250 150	450 450	450 450	TZS 22
4	Tear strength (N), min(both warp and weft direction)	-	31	5	TZS 208
5	Elongation at break (%), min a) Longitudinal b) Transverse	50 100	-	-	TZS 22
6	Bursting strength (kPa), min	400	-	-	TZS 22
7	Colour fastness to rubbing a) Wet rubbing, min b) Dry rubbing, min	4 4	4 4	4 4	TZS 138
8	Colour fastness to spotting by water	4	4	4	TZS 531
9	Colour fastness to light	4	4	4	TZS 40
10	Colour-fastness to artificial light (xenon arc)	-	5	5	TZS 23
11	Flexural Endurance, (minimum cycles)	300 000	300,000	700,000	TZS 206
12	Abrasion resistance (minimum cycles)	700	700	700	TZS 412
13	Blocking resistance	Separation without surface damage			ISO 5978

## **6 Packing, labelling and marking**

### **6.1 Packing**

The upholstery fabrics shall be packed in polyethylene bags or bales.

Unless otherwise required, the fabric shall be supplied in individually wrapped rolls and the rolls shall be packed as required.

### **6.2 Labelling and marking**

**6.2.1** Pieces and bulk containers shall be labelled and marked in accordance with This draft Tanzania standard. In the case of a pile fabric, and when so required, the direction of the lay of the pile shall be indicated by arrows stamped at intervals not exceeding 1 m on the reverse side of the fabric.

**6.2.2** The product shall be marked at one end with the following:

- a) Name of the material;
- b) Manufacturer's name, and or supplier's name, initials or trade mark;
- c) Design number;
- d) Width and length of the piece.

**6.2.3** The Masai shuka may also be marked with the TBS Standards Mark.

#### **NOTE 2**

The 'tbs' standards mark may be used by manufacturer only under licence from TBS. Particulars of conditions under which the licences are granted may be obtained from TBS.

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**ANNEX A**  
**(Informative)**  
**Visual examination for coated fabrics.**

**4.3 Visual examination for coated fabrics.**

The coating shall be uniformly applied and shall be free from visible flaws or cracks. Indicated local flaws are admitted, but no test specimen shall be cut less than 5 cm from the flaw.

When examined under a magnification of  $\times 6$ , the coating shall be substantially free of pinholes. Carry out the inspection by examining 10 areas, each measuring 2 cm  $\times$  2 cm, evenly distributed over the usable width and length of the sample. The mean pinhole density shall not be more than 10 per square decimetre (i.e. 2,5 times the total count shall be  $< 10$ ). This requirement does not apply to products stated to be micro perforated.

NOTE 1 Products which are stated to be micro perforated will normally be provided with special cleaning instructions.

Unless the coating is intentionally transparent, the knitted base fabric shall not be visible through the coating. Its profile shall also not be visible, either when the coated fabric is slack or when a slight tension is applied by hand. Its presence shall also not be apparent by virtue of any printing or surface lacquer which may be present. If the base fabric is visible in any of these ways, testing may be continued, but the visibility of the base fabric shall be reported in the test report.

NOTE 2 It is possible that the surface is marked with the pattern of the back surface if the roll has been wound too tight. Such marks are reversible and acceptable. They can be easily identified by heating a piece of coated fabric for a few minutes in an oven at a temperature around 100 °C: the marking due to tight winding disappears.

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