

# DRAFT UGANDA STANDARD

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## Textiles — Upholstery fabrics — Part 2: Knitted upholstery fabric — Specification



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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, Textiles, Leather and Paper products, Subcommittee SC 1, Textiles and Related products.

This second edition cancels and replaces the first edition (US 949-2:2011), which has been technically revised.

## Introduction

The assessment of upholstery fabrics is a complicated task. There is a multitude of experimental data available, but inter-laboratory testing show a large scattering of test results, in particular for abrasion testing, thus leading to important differences in quality perception. Furthermore the correlation between laboratory testing and actual wear behaviour in practice is not very well established.

Other characteristics like flammability specifications and requirements are so detailed, complex and all encompassing that separate, dedicated pieces of literature and information are required for each flammability specification.

It is not possible to divide upholstery fabrics into just a few performance classes, because of the enormous variety of conditions of use. Also the type of upholstery (firm or soft) influences the abrasion of the upholstery fabric and hence the requirements to the abrasion resistance. There is for example a tremendous difference between furniture used in a room without windows and furniture which is directly exposed to sunlight, or between furniture used by elder people and furniture used by a family with small children. These differences in conditions and severity of use necessitate a flexible approach. Hence no single performance specification can possibly apply to all the various fabrics that could be utilized for this end use. In certain instances, the specification provided by the ultimate consumer should be taken into consideration.

# Textiles — Upholstery fabrics — Part 2: Knitted upholstery fabric — Specification

## 1 Scope

This Draft Uganda standard specifies the requirements, methods of test and sampling for knitted upholstery fabrics as used in the manufacture of indoor furniture. It is not applicable to fabrics used in contract, porch, deck and lawn furniture, nor for woven fabrics, bounded or laminated fabrics, or surface coated fabrics (such as vinyls and urethanes).

## 2 Normative references

The following referenced documents are 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.

ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 105-E01, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water*

ISO 105-G02, *Textiles — Tests for colour fastness — Part G02: Colour fastness to burnt gas fumes*

ISO 105-X05, *Textiles — Tests for colour fastness — Part X05: Colour fastness to organic solvents*

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

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

ISO 6941, *Textile fabrics -- Burning behaviour -- Measurement of flame spread properties of vertically oriented specimens*

ISO 10528, *Textiles — Commercial laundering procedures for textile fabrics prior to flammability testing*

ISO 12138, *Textiles — Domestic laundering procedures for textile fabrics prior to flammability testing*

ISO 12947-1, *Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 1: Martindale abrasion testing apparatus*

ISO 12947-2, *Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 2: Determination of specimen breakdown*

ISO 13934-2, *Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method*

ISO 13936-1, *Textiles — Determination of the slippage resistance of yarns at a seam in woven fabrics — Part 1: Fixed seam opening method*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **contract furniture**

furniture manufacture for use in non-household application

#### 3.2

##### **furniture covering**

general term for attached upholstery fabric

#### 3.3

##### **upholstery fabric**

exterior fabric covering to a furniture unit

#### 3.4

##### **knitted fabrics**

fabric manufactured by intermeshing of loops (interloping) of yarns

### 4 Requirements

#### 4.1 General requirements

4.1.1 The upholstery fabrics used in the manufacture of this end product shall be of knitted material.

4.1.3 Flammability requirements shall be as agreed upon between the purchaser and supplier, provided they meet or exceed that specified under 4.2.2

4.1.4 In addition to the specifications listed in Table 1, upholstery fabrics shall meet the performance profile claimed by the manufacturer or required by the ultimate consumer.

NOTE It should be recognised that fabrics can be produced utilizing almost an infinite number of combinations of construction variables (type of fibre, percentage of fibre, yarn twist, yarn count, chemical and mechanical finished, etc.) Hence no single performance specification can possibly apply to all the various fabrics for this end-use. In such cases, the specification of the specified consumer should be taken into consideration.

#### 4.2 Specific requirements

##### 4.2.1 General

The properties of knitted upholstery shall conform to all of the specification requirements in Table 1.

Table 1 — Specification requirements

Characteristics	Specifications	Test methods
Dimensional change: Wale or course; <ul style="list-style-type: none"> <li>• Shrinkage</li> <li>• Elongation</li> </ul>	5.0 % max 2.0 % max	ISO 5077
Breaking strength	222 N	ISO 13934-2
Tongue tear strength <ul style="list-style-type: none"> <li>• Tricot knit only</li> <li>• Other knits</li> </ul>	45 N min 22 N min	ISO 13937-3
Resistance to yarn slippage (seam integrity)	111 N min	ISO 13936-1
Colour fastness to; <ul style="list-style-type: none"> <li>• Water (colour change)</li> <li>• Organic solvent (colour change)</li> <li>• Burnt gas fumes – 2 cycles</li> <li>• Light</li> <li>• Rubbing  <ul style="list-style-type: none"> <li>Dry</li> <li>Wet</li> </ul> </li> </ul>	4 4 4 4 4 3	ISO 105-E01 ISO 105-X05 ISO 105-G02 ISO 105-B02 ISO 105-X12 ISO 105-X12
Surface abrasion (double rubs), min. <ul style="list-style-type: none"> <li>• Light duty (3000 cycles)</li> <li>• Medium duty (9000 cycles)</li> <li>• Heavy duty (15000 cycles)</li> </ul>	No noticeable wear	ISO 12947-1 ISO 12947- 2

#### 4.2.2 Flammability requirement

**4.2.2.1** ISO 6941 Test method shall be used to evaluate flammability properties. In case a manufacturer claims an alternative method, the manufacturer shall demonstrate that such a method is technically equivalent or better to the one specified.

**4.2.2.2** When tested in accordance with ISO 6941, the average time to sever the upper trip thread for all specimens shall not be less than 20 s.

**NOTE** Except where specified that testing after an approved cleansing or wetting procedure is unnecessary, all samples for flammability test should be subjected to the appropriate procedure specified in ISO 10528 or ISO 12138 as appropriate. It is unnecessary to test such samples before the cleansing procedure.

## 5 Labelling

Each roll of fabric shall have a label securely attached in such a way that it can be retained with the roll indicating the following information. For fabrics supplied against a certain pattern, the information shall be available with the pattern:

- a) name and address of the manufacturer or distributor or other means of identification;

- b) fibre content of the fabric;
- c) dimensions or size (length and width);
- d) lot number or batch number
- e) care instructions
- f) country of origin; and
- g) any other marking as the contract or order may direct.

## 6 Assessment of compliance

### 6.1 Lot

**6.1.1** The quantity of upholstery fabrics of the same type and quality delivered to one buyer against one dispatch note shall constitute a lot.

**6.1.2** The conformity of the lot to the requirements of the standards shall be determined on the basis of tests carried out on the samples selected from the lot.

**6.1.3** Unless otherwise agreed upon between the buyer and the manufacturer, the number of pieces to be selected at random from a lot shall be in accordance with Table 2.

**Table 2 — Sample size**

Number of pieces in a lot	Sample size (number of pieces to be selected)	Sub-sample (test samples)
Up to 100	10	5
101 to 300	15	6
301 to 500	25	7
501 to 800	35	8
801 to 1300	50	9
1301 and above	75	10

### 6.2 Test specimens

Where not prescribed in the relevant test method indicated against each characteristic in Table 1, the test specimens shall be taken at points as widely dispersed as possible throughout the available test samples.

### 6.3 Criteria of compliance

The lot shall be declared as conforming to specification for various characteristics referred in Table 1 and 4.2.2, if for each of the characteristics, the mean values of the test results on all the individual specimens are found to be within limits of the specification. Failing of a sample on account of any of the characteristics shall mean rejection of the full lot.



## Bibliography

ASTM D4771M -19, *Standard Performance Specification for Knitted Upholstery Fabrics for Indoor Furniture*

Public Review Draft



## 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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