SRI LANKA STANDARD 838: PART 1: 1988

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SPECIFICATION FOR

BASE FABRICS FOR POLYMER COATING,

PART 1 — WOVEN FABRICS FOR UPHOLSTERY

SRI LANKA STANDADRS INSTITUTION

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PART 1 : WOVEN FABRICS FOR UPHOLSTERY

SLS 838:Part 1:1988

Gr. 5

SRI LANKA STANDARDS INSTITUTION
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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD

SPECIFICATION FOR BASE FABRICS FOR POLYMER COATING

PART 1 : WOVEN FABRICS FOR UPHOLSTERY

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1988-12-12, after the draft, finalized by the Drafting Committee on Base Fabrics, had been approved by the Textiles Divisional Committee.

This part covers woven base fabrics mainly suitable to manufacture polymer-coated fabrics for upholstery. Specifications for other base fabrics will be covered in separate parts.

Three types of woven base fabrics are specified in this part. Constructional details to manufacture these three types are given in Appendix A, as a guidance to the manufacturers.

Clauses 4.1.2, 4.1.5, 4.2.2, 4.2.3 and 5 of this specification call for agreement between the purchaser and the supplier.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the results of a test or an analysis, shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this specification, the assistance derived from the publications of the American Society for Testing and Materials and the South African Bureau of Standards is gratefully acknowledged.

1 SCOPE

This part prescribes the requirements and methods of sampling and test for cotton woven base fabrics suitable to manufacture polymer coated fabrics for upholstery.

2 REFERENCES

ASTM D 1424		Determination of tear resistance of woven fabrics by falling-pendulum (Elmendorf) apparatus.
SLS	42	Determination of mass per unit length and per unit area of woven or knitted fabrics (First revision).
CS	43	Determination of breaking load and extension of strips of woven textile fabric.
SLS	45	Determination of length of woven fabric (First revision).

SLS	46	Determination of width of woven fabric (First revision).
SLS	47	Method for shrinkage of fabrics - cold water immersion test.
CS	86	Determination of pH value of aqueous extracts of textile materials.
CS	87	Determination of scouring loss in grey and finished cotton textile materials.
CS	89	Determination of bow and skewness of woven fabric.
CS	102	Presentation of numerical values.
SLS	137	Grey cotton yarn Part 1 : Powerloom (First revision).
SLS	428	Random sampling methods.

3 TYPES

This specification covers the following types of woven base fabrics for the use of polymer coating.

Type 1 : for heavy duty upholstery
Type 2 : for medium duty upholstery
Type 3 : for light duty upholstery

4 REQUIREMENTS

4.1 General requirements

4.1.1 The base fabric shall be made from cotton yarn.

NOTE - Cotton yarn conforming to SLS 137:Part 1 *is suitable for the manufacture of the fabric.*

4.1.2 Unless otherwise specified by the purchaser, the fabric shall be woven in plain weave.

4.1.3 The fabric shall be free from defects that may impair its serviceability.

4.1.4 The fabric shall not contain any substance that may affect bonding of the coating.

4.1.5 The fabric shall be in grey or bleached form as agreed to between the purchaser and the supplier.

4.2 **Other requirements**

4.2.1 The fabric shall also conform to the requirements given in Table 1 when tested in accordance with the methods prescribed in Column 6 of the table.

TABLE 1 - Requirements for base fabrics

Sl. No. (1)	Characteristic (2)	Requirement for Type 1	Type 2	Type 3	Method of test (4)
i)	Mass per unit area, g/m^2, min.	200	150	100	SLS 42
ii)	Breaking strength, N, min.				CS 43
	a) warp way	500	400	250	
	b) weft way	500	400	250	
iii)	Tearing strength, N, min.				ASTM D 1424
	a) warp way	30	24	16	
	b) weft way	30	24	16	
iv)	Shrinkage or elongation, in warp way and weft way, per cent, max.				CS 47
	a) for preshrunk fabric	1	1	1	
	b) for unshrunk fabric	3	3	3	
v)	pH of the aqueous extract	6.0 to 8.5	6.0 to 8.5	6.0 to 8.5	CS 86
vi)	Scouring loss, per cent, max.	2	2	2	CS 87
vii)	Skewness, per cent, max.				CS 89
	a) of weft	3	3	3	
	b) at any part of the fabric	5	5	5	

4.2.2 The length of a piece shall be as agreed to between the purchaser and the supplier. When determined by the method prescribed in SLS 45, the length of the piece shall be not less than the value specified/declared.

4.2.3 The width of the fabric shall be as agreed to between the purchaser and the supplier. When determined by the method prescribed in SLS 46 the width of the fabric shall be not less than the specified value.

4.2.4 The selvedges shall be firm, straight and well-woven. The width of the selvedge shall be not less than 5 mm.

5 PACKAGING

The fabric shall be packed in a manner acceptable to the purchaser in single pieces or in bales.

6 MARKING

6.1 Single pieces

The following information shall be legibly and indelibly marked on each piece or on a label securely attached.

a) Name of the product;
b) Type;
c) Name and address of the manufacturer (including the country of origin);
d) Registered trade mark, if any;
e) Brand name, if any;
f) Width, in millimetres;
g) Length, in metres; and
h) Batch or code number.

6.2 Bales

The following information shall be legibly and indelibly marked on each bale or on a label securely attached.

a) Name of the product;
b) Type;
c) Name and address of the manufacturer (including the country of origin);
d) Registered trade mark, if any;
e) Brand name, if any;
f) Width, in millimetres;
g) Total length, in metres;
h) Number of pieces; and
j) Batch or code number.

7 SAMPLING

The method of drawing representative samples of the fabric for ascertaining conformity to the requirements of this specification shall be as follows:

7.1 Lot

All pieces of base fabrics of one type and belonging to one batch of manufacture shall constitute a lot.

7.2 Scale of sampling

7.2.1 Samples shall be tested from each lot for ascertaining its conformity to the requirements of this specification.

7.2.2 The number of pieces to be selected from a lot shall be in accordance with Table 2.

TABLE 2 -Scale of sampling

Number of pieces in the lot (1)	Number of pieces/bales to be selected (2)
Up to 15	2
16 to 35	3
36 to 50	4
51 and above	5

7.2.3 If the pieces are packed in bales the number of pieces in the lot shall be calculated and the number of bales to be selected from the lot, shall be in accordance with Column 2 of Table 2. One piece shall be selected from each bale so selected.

7.2.4 Bales and pieces shall be selected at random. In order to ensure randomness of selection, tables of random numbers as given in SLS 428 shall be used.

7.3 Number of tests

7.3.1 Each piece selected as in 7.2.2 shall be inspected for marking requirements.

7.3.2 Each bale selected as in 7.2.3 shall be inspected for marking requirements.

7.3.3 Each piece selected as in 7.2.2 or 7.2.3 shall be tested for requirements given in 4.2

8 METHODS OF TEST

Test for the requirements laid down in 4.2 shall be carried out by the methods prescribed therein.

9 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied.

9.1 Each piece inspected as in 7.3.1 satisfies the relevant requirements.

9.2 Each bale inspected as in 7.3.2 satisfies the relevant requirements.

9.3 In case of lots having less than 16 pieces, each piece tested as in 7.3.3 satisfies the relevant requirements.

9.4 In case of lots having 16 or more pieces, the test results when tested as in 7.3.3 satisfy the following conditions.

9.4.1 The values of the expression, $\bar{x}$-1.1s (see Notes) calculated using the test results on mass per unit area, breaking strength and tearing strength are not less than the specified values for each requirement.

NOTES

1 *Mean* ($\bar{x}$) = *The sum of values of the observations divided by the number of observations.*

2 *Standard deviation* (s) = *The positive square root of the quotient obtained by dividing the sum of squares of the deviations of the observations from their mean by one less than the number of observations in the sample.*

9.4.2 The values of the expression, $\bar{x}$+1.1s, calculated using the test results on shrinkage, scouring loss and skewness are not more than the specified value for each requirement.

9.4.3 The values of the expressions $\bar{x}$+1.1s and $\bar{x}$-1.1s calculated using the test results on pH lie between the specified values.

9.5 Each piece tested for length, width, and selvedge satisfies the relevant requirement.

APPENDIX A
SUITABLE CONSTRUCTIONAL DETAILS

Type	Linear density, tex		Ends per 10 mm	Picks per 10 mm
	Warp	Weft		
(1)	(2)	(3)	(4)	(5)
1	60	60	20	18
2	37	37	24	22
3	30	30	20	18

SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

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Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.

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