SRI LANKA STANDARD 838 : PART 2 : 1990

UDC 677.01/.08 : 678 : 684

SPECIFICATION FOR

BASE FABRICS FOR POLYMER COATING

PART 2 - WEFT KNITTED FABRICS FOR UPHOLSTERY

SRI LANKA STANDARDS INSTITUTION

- Blank Page -

SPECIFICATION FOR BASE FABRICS FOR POLYMER COATING

PART 2 : WEFT KNITTED FABRICS FOR UPHOLSTERY

SLS 838 : 1990

Gr. 4

Copyright Reserved

SRI LANKA STANDARDS INSTITUTION
53, Dharmapala Mawatha,
Colombo 3,
Sri Lanka.

DRAFTING COMMITTEE ON BASE FABRICS

CONSTITUTION

	CHAIRMAN	*REPRESENTING*
Mr	D.P.D. Dissanayake	University of Moratuwa
	MEMBERS	
Dr	P.K.T. Dias	University of Moratuwa
Mr	M.N.C. Fernando	Textile Training & Services Centre
Mr	R.P. Herath	Sri Lanka Central Transport Board
Mr	S. Liyanage	Lanka Vinyl Limited
Mr	D.R. White	Richard Peiris & Company Limited

TECHNICAL SECRETARIAT

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

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 2 : WEFT KNITTED FABRICS FOR UPHOLSTERY

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1990-11-20, after the draft, finalized by the Drafting Committee on Base Fabrics, had been approved by the Textiles Divisional Committee.

This part covers weft knitted base fabrics suitable to manufacture polymer-coated fabrics for upholstery. As warp knitted fabrics are not used as base fabrics in this country, at present, only weft knitted fabrics are covered in this part. Specifications for woven base fabrics for upholstery are covered in **Part 1** of the standard.

Clauses **3.2.3**, **3.2.4** and **3.2.5** of this specification call for agreement between the purchaser and the supplier.

Few suitable constructional details are given in **Appendix A** as a guidance to the manufacturers.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result 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.

1 SCOPE

This part prescribes the requirements and methods of sampling and test for weft knitted base fabrics made from suitable yarn for manufacture of polymer-coated fabrics for upholstery.

2 REFERENCES

CS 42 Determination of mass per unit length and per unit area of woven or knitted fabrics (First revision).
SLS 46 Determination of width of woven fabric (First revision).
CS 102 Presentation of numerical values.
SLS 428 Random sampling methods.
SLS 582 Determination of bursting strength and bursting distention of fabrics-diaphram method.
SLS 774 Tests for knitted fabric construction.

3 REQUIREMENTS

3.1 General requirements

3.1.1 The fabric shall have a plain-knitted structure.

3.1.2 The fabric shall be evenly knitted.

3.1.3 The fabric shall be reasonably free from neps.

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

3.2 Other requirements

3.2.1 The number of holes and ladders in a length of fabric weighing 30 kg shall be not more than six. Any hole with a diameter exceeding 10 mm or any ladder exceeding the ladder height of 15 mm shall be not present in the fabric (see 7.2).

3.2.2 The fabric shall also conform to the requirements given in Table 1, when tested by the methods prescribed in Column 4 of the table.

TABLE 1 - Requirements for weft knitted base fabrics

Sl.No. (1)	Characteristic (2)	Requirement (3)	Method of test (4)
i)	Courses/cm to wales/cm ratio	1.0 to 1.3	SLS 774
ii)	Mass per unit area, g/m^2, min.	35	CS 42
iii)	Bursting strength, kPa, min.	450	SLS 582

3.2.3 The minimum mass of a roll shall be as agreed to between the purchaser and the supplier.

3.2.4 The maximum number of pieces stitched together in one roll and the minimum length of each such piece shall be as agreed to between the purchaser and the supplier.

3.2.5 The width of the fabric shall be as agreed to between the purchaser and the supplier. A tolerance of $\pm$ 3 per cent of the full width (see Note) shall be permitted, when tested by the method prescribed in SLS 46, after keeping the fabric in a relaxed state for a minimum period of 24 hours.

NOTE

The tube width should be multiplied by two, to get the full width.

4 PACKAGING

The fabric shall be packed in roll-form or in any other manner acceptable to the purchaser. It shall be wrapped in polyethylene or any other suitable material. The wrapper shall not contain any colourant capable of staining the fabric on wetting.

5 MARKING

The following information shall be legibly marked or labelled on each roll:

a) Name of the material including the type of yarn;
b) Name and address of the manufacturer and/or distributor (including the country of origin);
c) Mass, in kilograms;
d) Tube width, in millimetres;
e) Registered trade mark, if any; and
f) Batch or code number.

NOTE

Attention is drawn to the certification facilities offered by the Sri Lanka Standards Institution. See the inside back cover of this specification.

6 SAMPLING

6.1 Lot

In any consignment all the rolls of weft knitted base fabrics belonging to one batch of manufacture or supply shall constitute a lot.

6.2 Scale of sampling

6.2.1 The samples shall be tested from each lot for ascertaining its conformity to the requirements of this specification.

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

TABLE 2 - Scale of sampling

Number of rolls in the lot (1)	Number of rolls to be selected (2)
Up to 50	3
51 to 150	4
151 and above	5

6.2.3 The rolls shall be selected at random. In order to ensure randomness of selection tables of random numbers as given in SLS 428 shall be used.

6.3 NUMBER OF TESTS

6.3.1 Each roll selected as in 6.2.2 shall be inspected for the requirements for packaging and marking (4 and 5), holes and ladders (3.2.1) and number of pieces stitched together (3.2.4).

NOTE

Tests for holes and ladders and mass of rolls (see 6.3.2) should be carried out only if requested by the interested party.

6.3.2 Each roll selected as in 6.2.2 shall be measured for mass of the roll (3.2.3), length of each piece stitched together (3.2.4) and for the width (3.2.5). See Note under 6.3.1 .

6.3.3 A sufficient length of material shall be cut from each roll selected as in 6.2.2 and tested for the requirements given in 3.2.2.

NOTE

The required test specimens should be taken in accordance with the relevant test methods.

7 METHODS OF TEST

7.1 Tests for the requirements prescribed in 3.2 shall be carried out by the methods given therein .

7.2 The allowed number of holes and ladders for each roll under consideration shall be calculated proportionately with respect to the requirement given in 3.2.1, depending on the mass of each roll under test.

8 CRITERIA FOR CONFORMITY

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

8.1 Each roll inspected as in 6.3.1 satisfies the relevant requirements for packaging and marking, holes and ladders and number of pieces in the roll.

8.2 When tested as in 6.3.2, the value of the expression $\bar{x}$ - 1.1s (see Notes) calculated using the test results on mass of roll is not less than the agreed value.

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.*

8.3 When tested as in 6.3.2 and 6.3.3, the value of the expression $\bar{x}$- 1.1 s calculated using the test results on length of pieces, mass per unit area and bursting strength is not less than the specified value for each requirement.

8.4 When tested as in 6.3.2 and 6.3.3, the values of the expressions $\bar{x}$ + 1.1 s and $\bar{x}$ - 1.1 s calculated using the test results on width and ratio of courses/cm to wales/cm lie between the agreed or specified value for each requirement.

APPENDIX A
FEW SUITABLE CONSTRUCTIONAL DETAILS FOR WEFT KNITTED BASE FABRICS

Sl. No. (1)	Type of yarn (2)	Characteristic		
		Linear density of yarn, tex (3)	Courses/cm (4)	Wales/cm (5)
i)	100% polyester filament	8	13	12
ii)	100% viscose	30	14	12
iii)	65% polyester 35% viscose	20	10	9

- Blank Page -

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.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

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

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

Printed at SLSI (Printing Unit)