SRI LANKA STANDARD 839: 1988

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SPECIFICATION FOR

NYLON MOSQUITO NETTING FOR DOMESTIC USE

SRI LANKA STANDARDS INSTITUTION

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SLS 839:1988
(Attached AMD 174)

Gr. 5

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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD

SPECIFICATION FOR NYLON MOSQUITO NETTING FOR DOMESTIC USE

FOREWORD

The 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 Mosquito netting had been approved by the Textiles Divisional Committee.

Terminology used in this specification are in accordance with "Textile terms and definitions" (7th edition) published by the Textile Institute of the United Kingdom.

All standards values in this specification are given in SI units.

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 that of the specified value in this specification.

In the preparation of this specification, valuable assistance derived from the publications of the Bureau of Indian Standards, South African Bureau of Standards and the Textile Institute of United Kingdom is gratefully acknowledged.

1 SCOPE

This specification prescribes the requirements and methods of sampling and tests for bleached or dyed, nylon mosquito netting.

2 REFERENCES

CS 16 Standard atmosphere for conditioning and testing textiles.
CS 42 Determination of mass per unit length and per unit area of woven or knitted fabrics.
CS 46 Determination of width of woven fabrics (First Revision).
CS 55 Determination of colour fastness of textile materials to washing at 95 ^{o}C for 30 minutes (Test 3).
CS 62 Determination of colour fastness of textile materials to daylight.
CS 86 Determination of pH value of aqueous extracts of textile materials.
CS 102 Presentation of numerical values.
SLS 428 Random sampling methods.
SLS 582 Determination of bursting strength and bursting distension of fabrics -diagphram method.
SLS ...* Textile polyamide (Nylon) yarn.

3 REQUIREMENTS

3.1 General requirements

3.1.1 *Yarn*

The yarn conforming to SLS ....* is suitable for use in the manufacture of the cloth.

3.1.2 *Fabric*

The fabric shall be of 1 and 1 construction. Proportionate setting of holes on base and bias shall be 10 to 11:14 to 15 when examined visually.

3.1.3 *Defects*

The fabric when visually examined, shall be reasonably free from defects.

3.1.4 *Colour*

The fabric shall be dyed to suitable shades as agreed to between the buyer and the seller.

3.2 Length

The length of each piece, shall be or as agreed to between the buyer and the seller. The length of a roll when determined by the method prescribed in SLS 45, shall be not less than the value specified/declared.

3.3 Width

The width of the fabric shall be as agreed to between the buyer and the seller. A tolerance of ± 3 per cent of the specified width shall be permitted when determined by the method prescribed in SLS 46.

3.4 Selvedge

The selvedge shall be firm and straight. The width of the selvedge shall be not less than 2 mm.

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* *Under preparation.*

3.5 The fabric shall also comply with requirements given in Table 1 when determined according to the relevant methods given in Column 4 of the table.

TABLE 1 - Requirements for nylon mosquito netting

Sl. No. (1)	Characteristic (2)	Requirement (3)	Method of test (4)
i)	Total number of holes on base and bias within 625 mm^2	25 to 30	7.2
ii)	Mass per unit area, g/m^2, min.	24	CS 42
iii)	Dimensional change (in each directions), per cent, max.	2.0	7.3
iv)	Bursting strength, kPa, min.	250	SLS 582
v)	pH value of aqueous extract	6.0 to 8.5	CS 86
vi)	Colour fastness		
	a) to daylight, min.	5	CS 62
	b) to washing, min.	4	CS 55

4 PACKAGING

The fabric shall be rolled or folded in single pieces and completely wrapped in polyethylene or any other suitable material. The wrapper shall not contain any colourant capable of staining the fabric on wetting.

5 MARKING

5.1 The following shall be marked legibly on the fabric at both ends of each piece.

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

6 SAMPLING

6.1 Lot

In any consignment all the pieces of nylon mosquito netting belonging to one batch of manufacture or supply shall constitute a lot.

6.2 Scale of sampling

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

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

TABLE 2 - Scale of sampling

No. of pieces in the lot (1)	No. of pieces to be selecteed (2)
Up to 8	2
9 to 15	3
16 to 25	4
26 to 50	5
51 and above	7

6.2.3 The 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.

6.3 Number of tests

6.3.1 Each piece selected as in 6.2.2 shall be inspected for packaging (4) and marking (5) requirements.

6.3.2 Each piece selected as in 6.2.2 shall be examined for the requirements given in 3.1.2, 3.1.3 and 3.2 to 3.5.

7 METHOD OF TEST

7.1 Tests for the requirements given in 3.2, 3.3 and 3.5 shall be carried out by the methods prescribed therein.

7.2 Determination of total number of holes on base and bias within 625 mm^2.

7.2.1 *Atmospheric conditions for testing*

Condition the samples, prior to test. The atmospheres required for pre-conditioning, for conditioning and testing shall be those specified in CS 16.

7.2.2 *Procedure*

Lay a sample on a smooth table and mark squares measuring 25 mm x 25 mm at five different places across the width of the sample and count the number of holes in the direction of base and bias as indicated in Figure 1. Count the hole marked 'x' both in the base and bias. Determine the average. Repeat the test with remaining samples.

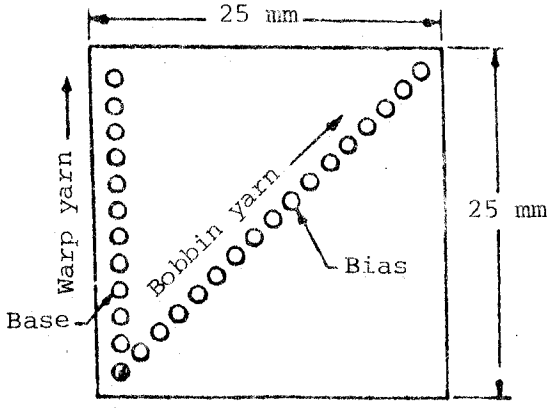

FIGURE 1 - Holes on base and bias

7.3 Determination of dimensional change (due to relaxation)

7.3.1 *Marking of test specimens*

7.3.1.1 Cut from each sample a test specimen measuring approximately 200 mm x 200 mm in such a way that the two of its sides are parallel to the direction of wales and the other two parallel in the direction of courses. Mark the directions of wales and courses in the test specimen.

7.3.1.2 Mark centrally on the test specimen by means of indelible ink or a fast dyed cotton sewing thread an area 150 mm x 150 mm with two of its sides in the direction of wales and the other two in the direction of courses. Spread this test specimen on a flat smooth surface, carefully remove by hand all creases and wrinkles. Within this area, mark six pairs of marks, three pairs each in the direction of wales and the direction of courses. (see Figure 2) so that the distance between each pair of marks is equal.

The pairs of marks 1 1, 2 2, 3 3, are in the direction of courses.

The pairs of marks 4 4, 5 5, 6 6, are in the direction of wales.

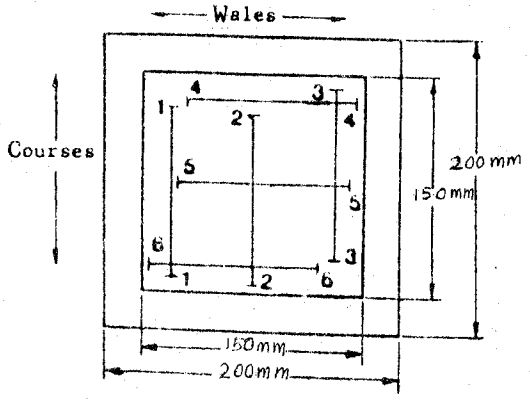

FIGURE 2 - Marking of the test specimen

7.3.2 *Procedure*

7.3.2.1 Place the test specimen on a glass plate and carefully remove by hand all creases and wrinkles without distorting it and place the other glass plate on the test specimen. Measure, to the nearest millimetre, the distance between each pair of marks separately.

7.3.2.2 Lay the specimen flat in a water-tight tray of suitable size and a depth of at least 10 mm. Soak it under a head of 25 mm water containing 0.5 per cent suitable wetting agent at room temperature (30 °C to 35 °C) for 2 hours. Drain out the water and remove the test specimen carefully so that it is not stretched and lay it flat on a smooth surface. Remove the excess of water by absorbent material and dry it at room temperature.

7.3.2.3 After drying, condition the test specimen. The atmospheres required for pre-conditioning, for conditioning and testing are those specified in CS 16. Place it on the glass plate, carefully remove all wrinkles and creases and place the other glass plate on the test specimen. Measure to the nearest millimetre, the distance between each pair of marks.

7.3.3 *Calculation*

7.3.3.1 Calculate, the percentage of dimensional change both in the direction of wales and in the direction of course by the following formula :

$$\text{Dimensional change, per cent} = \frac{(a - b)}{a} \times 100$$

where,

a = the distance in millimetres, between a pair of marks (along the wales or courses as the case may be) before soaking; and

b = the distance in millimetres, between the same pair of marks after soaking.

7.3.3.2 Calculate separately the dimensional change between all three pairs of marks in the direction of wales and in the direction of courses and calculate the average dimensional change in each direction.

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 piece inspected as in 6.3.1 satisfies the relevant requirements.

8.2 Each piece examined as in 6.3.2 satisfies the requirements given in 3.1.2, 3.1.3, 3.2 and 3.3 and the requirements for total number of holes on base and bias within 625 mm^2 and colour fastness.

8.3 In case of lots having less than nine pieces, each piece tested as in 6.3.2 satisfies the relevant requirements.

8.4 In case of lots having nine or more pieces the test results when tested as in 6.3.2 satisfy the following conditions.

8.4.1 The values of the expression $\bar{x}$ - 1.1s (see Notes) calculated using the test results on the width of the selvedge (3.4), mass per unit area (3.5), and bursting strength (3.5) are not less than the specified values.

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.

8.4.2 The value of the expression $\bar{x}$ + 1.1s calculated using the test results on dimensional change (3.5) is less than the specified value.

8.4.3 The values of the expressions $\bar{x}$ - 1.1s and x + s calculated using the test results on pH values (3.5) lie between the two specification limits.

Amendment No. 1 approved on 1995-04-27 to SLS 839 : 1988

Sri Lanka Standard Specification for Nylon mosquito netting for domestic use.

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Table 1

Delete the item Nos (iii) and (vi) of Table 1 and substitute the following

Sl. No.	Charactertistic	Requirement	Method of test
(iii)	Dimensional change per cent, max		7.3
	lengthwise	2.0	
	widthwise	3.0	
(vi)	Colour fastness		
	(a) to light, min	4	SLS 62

Delete millimetres in 5.1 (e) and substitute centimetres.

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.

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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.

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