SRI LANKA STANDARD 1356 : 2008
ISO 22198 : 2006

METHODS FOR DETERMINATION OF WIDTH AND LENGTH OF TEXTILE FABRICS

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard

METHODS FOR DETERMINATION OF WIDTH AND LENGTH OF TEXTILE FABRICS

SLS 1356 : 2008
ISO 22198 : 2006
(Superseding SLS 45 : 1980 and SLS 46 : 1980)

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SRI LANKA.

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
METHODS FOR DETERMINATION OF WIDTH AND LENGTH OF TEXTILE FABRICS

NATIONAL FOREWORD

This standard was approved by the Sectoral Committee on Textiles, Clothing and Leather and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2008-12-19.

This Sri Lanka Standard is identical with ISO 22198 : 2006 Textiles – Fabrics – Determination of width and length. This standard supercedes SLS 45 : 1980 Method for measurement of length of woven fabric which was an adoption of ISO 3933 : 1976 and SLS 46 : 1980 Method for measurement of width of woven fabric which was an adoption of ISO 3932 : 1976.

ISO 3933:1976 and ISO 3932:1976 have been cancelled and replaced by ISO 22198:2006.

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as suitable for publication without deviation, as a Sri Lanka Standard. However certain terminology and conventions are not identical with those used in Sri Lanka Standards, attention is therefore drawn to the following :

a) Wherever the words “International Standard/Publication” appear referring to this standard they should be interpreted as “ Sri Lanka Standard ”.

b) The comma has been used throughout as a decimal marker. In Sri Lanka Standards it is the current practice to use a full point on the baseline as the decimal marker.

c) Wherever page numbers are quoted, they are ISO page numbers.

CROSS REFERENCES

International Standard	Corresponding Sri Lanka Standard
ISO 139 Textiles-standard atmospheres for conditioning and testing	SLS 16 Textiles – Standard atmospheres for conditioning and testing
ISO 10012 – 1 Quality assurance requirements for measuring equipment. Part 1 : Metrological confirmation system for measuring equipment .	No equivalent Sri Lanka Standard.

INTERNATIONAL STANDARD

ISO 22198

First edition
2006-10-01

Textiles — Fabrics — Determination of width and length

Textiles — Étoffes — Détermination de la largeur et de la longueur

Reference number
ISO 22198:2006(E)

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Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22198 was prepared by CEN (as EN 1773:1996) and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 24, *Conditioning atmospheres and physical tests for textile fabrics*, in parallel with its approval by the ISO member bodies.

This first edition of ISO 22198 cancels and replaces ISO 3932:1976 and ISO 3933:1976, which have been technically revised.

INTERNATIONAL STANDARD **ISO 22198:2006(E)**

Textiles — Fabrics — Determination of width and length

1 Scope

This International Standard specifies a method for the determination of length and width of textile fabrics that are in a tension-free relaxed state. The test is applicable to textile fabrics of full width, folded lengthwise down the middle, or in tubular form, but no longer than 100 m. This International Standard does not specify a method to determine or describe construction defects or other defects. It is not applicable to coated 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.

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*

ISO 10012-1, *Quality assurance requirements for measuring equipment — Part 1: Metrological confirmation system for measuring equipment*

3 Terms and definitions

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

3.1
length of piece
distance between the beginning and the end of the sample in the lengthwise or machine direction

3.2
overall width of piece
distance between the outermost edges of the sample measured perpendicular to the longitudinal edges

3.3
usable width of piece
width of the fabric excluding any selvedge materials, marks, pin-holes or other non-homogeneous areas of the fabric

NOTE For some end uses or specifications, the usable width may be defined differently, as agreed between the interested parties.

4 Principle

A sample of textile fabric, conditioned in the relaxed state in the standard atmosphere for testing, is laid out on a smooth surface. A calibrated rule is used to determine the length and the width of the piece. For determination of the length of a sample, it may be necessary to measure partial lengths. The total length of the sample then results from the sum of these partial lengths.

5 Sampling

Samples shall be selected either in accordance with the procedure laid down in the material specification for the fabric or as agreed between the interested parties.

6 Apparatus

6.1 Calibrated rule, conforming to ISO 10012-1, and having a length greater than the width of the fabric or 1 m, whichever is higher, graduated in millimetres.

6.2 Measuring table, having a smooth flat surface and a width and length greater than the fabric when placed for measuring. The table shall be at least 3 m in length to allow measuring of samples with a length greater than 2 m. Along the two longest parallel sides of the table, consecutive markers are placed at distance of 1 m ± 1 mm.

The distance of the first marker for the nearest end table shall be 0,5 m to allow proper positioning of the sample. For long pieces to be measured in partial lengths, the whole piece shall be placed on the table during the measurement of the individual length intervals (see Annex A).

7 Atmosphere for conditioning, testing and relaxation

The atmospheres for preconditioning, conditioning and testing shall be as specified in ISO 139.

The fabric shall be conditioned and measured in the relaxed state. To ensure the relaxed state, the sample shall be laid out, free of tension, either in its full width, folded down the middle along the length of fabric, or tubular, depending on the make up of the sample.

NOTE An illustration of handling of fabrics of great length is given in Annex A.

To ensure that the relaxed state is reached, place preliminary markers at two intervals along the fabric. The sample shall be considered adequately relaxed if the difference between length measurements at time intervals of 24 h is less than 0,25 %. If knitted fabrics are to be tested not as received, but after special treatment, this shall be agreed by the interested parties and shall be stated in the test report.

8 Procedure

8.1 General

The sample shall be laid out flat on the surface of the measuring table. The test shall be performed on the fabric as made up in full width or folded down the middle along the length of the fabric or in tubular form. Avoid distortion of the fabric in its own plane.

8.2 Measuring the length of the sample

8.2.1 Samples shorter than 1 m

Samples having a length of less than 1 m shall be measured by placing the rule (see 6.1) parallel to the longitudinal edges to the nearest millimetre. Repeat the procedure of measuring the full length of the sample three times at different places across the width of the fabric.

8.2.2 Samples longer than 1 m

Mark the fabric at the edges. Place second markers at a distance of 1 m using the markers on the table as stated in 6.2. Mark the entire sample in consecutive increments of 1 m. The residual length of less than 1 m is measured using the calibrated rule described in 6.1. The total length of the sample is the sum of the 1 m increments plus the residual length. Repeat the procedure three times with new marker strokes being placed on the sample if necessary.

The interested parties shall agree in advance whether the connecting strips at the beginning and the end of the sample are to be included in the length measurement.

8.3 Measuring the width of the sample

The width of fabrics made up full width is the distance between the outermost edges measured perpendicular to the edges. The width of a fabric folded vertical down the middle is double the distance from the folded edge to the congruently superimposed outer edges, measured perpendicular to the folded edge.

If the outer edges are not superimposed congruently, the measurement shall be made from the folded edge to the edge nearest to it. This shall be stated in the test report. The width of a fabric in tubular form is the distance from edge to edge measured perpendicular to the edges when the sample is positioned properly and the edges are kept flat. Measure the width of the sample distributed uniformly over the entire length of the sample.

— For sample lengths up to 5 m: 5 determinations.

— For sample lengths up to 20 m: 10 determinations.

— For sample lengths more than 20 m: at least 10 determinations at distance of 2 m.

If the width of the fabrics is not to be measured as the overall width from edge to edge, then the parties interested in the result shall agree on the definition of the usable width. This shall be stated in the test report.

If the usable width is to be measured, then the measurements shall be made according to the overall width, but avoiding any selvedge, etc., described in 3.3. The usable width may be defined differently because of variations in weaving construction or because of special requirements for the manufacturing of garments or other made-up products.

9 Calculation and expression of results

9.1 Length of piece

Calculate the arithmetic mean of the length of the sample in metres to the nearest centimetre. If required, calculate the coefficient of variation in percent to the nearest 1 % and the 95 % confidence limits to the nearest centimetre, or state the results of the individual measurements in metres to the nearest centimetre.

9.2 Width of piece

Calculate the arithmetic mean of the width of the sample in metres to the nearest centimetre and, if required, the coefficient of variation in percent to the nearest 1 % and the 95 % confidence limits to the nearest centimetre.

10 Test report

The test report shall include the following information:

a) general information

   1) the number and date of this International Standard and the date of test,

   2) identification of the sample and sampling procedure,

   3) the configuration of the sample (made up full width, folded down in the middle along the length of the fabric, tubular form) and a statement if the sample was tested after special treatment,

   4) any deviation from the given procedure;

b) length of sample

   1) the arithmetic mean of the length, in metres,

   2) if required, the coefficient of variation, in percent, and the 95 % confidence limits, in metres, or the results of the individual measurements, in metres,

   3) a statement if the length of the edges varied, e.g. because of stretching of one edge and if connecting strips were included in the measurement;

c) width of sample

   1) a statement if the width was measured as overall width or as usable width or as some other defined and agreed width,

   2) the arithmetic mean of the width, in metres,

   3) if required, the coefficient of variation, in percent, and the 95 % confidence limits, in metres,

   4) the minimum width, in metres.

Annex A
(informative)

Arrangement for conditioning, relaxing and measurement

A convenient and effective method of arranging a long piece of fabric for conditioning so that it is free from applied tension and is well exposed to the conditioning atmosphere is to unroll the piece and lay it in loose corrugated folds of suitable size (see Figure A.1).

During marking and measuring, it is essential that the piece of fabric whose width is being determined should be free from tension as it lies on the measuring table. To achieve this, it has been found convenient to cuttle-fold (see Figure A.2) the ends of the piece which extend beyond the portion being measured, thus producing a stack of fabric at each end of the portion being measured.

If the measuring table is too short to enable this method to be used, supplementary tables may be used at each end of the measuring surface, provided that such extra tables are exactly the same height and at least as wide as the main table, and that they are so placed as to form (with the measuring table) a continuous rectangular surface.

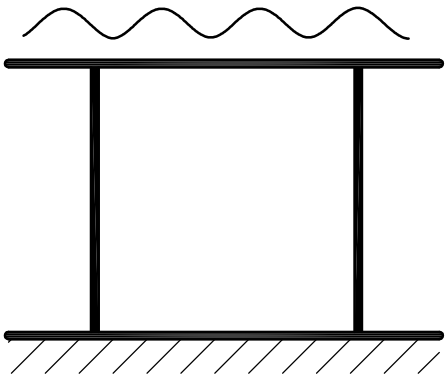

Figure A.1 — Loose folding

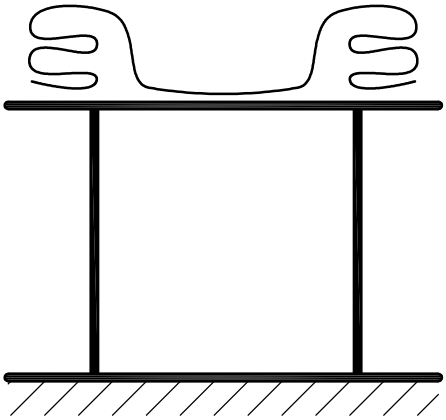

Figure A.2 — Cuttle-folding

ICS 59.080.30
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Printed at SLSI (Printing Unit)

SRI LANKA STANDARDS INSTITUTION

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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.