

SRI LANKA STANDARD 1354 PART 3 : 2008
ISO 2286 -3 :1998

**METHODS FOR DETERMINATION OF
ROLL CHARACTERISTICS OF RUBBER –
OR PLASTICS - COATED FABRICS
PART 3 : DETERMINATION OF THICKNESS**

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
METHODS FOR DETERMINATION OF ROLL CHARACTERISTICS OF
RUBBER - OR PLASTICS - COATED FABRICS
PART 3 : DETERMINATION OF THICKNESS

SLS 1354 Part 3 : 2008
ISO 2286 - 3 : 1998
(Superseding SLS 761 Part 1 : 1986)

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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.

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**METHODS FOR DETERMINATION OF ROLL CHARACTERISTICS OF
RUBBER - OR PLASTICS - COATED FABRICS
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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 2286 – 3 : 1998 Rubber – or plastics – coated fabrics. Part 3 : Method for determination of thickness

This standard supercedes SLS 761-1 Methods of test for rubber or plastic coated fabrics. Part 1 : 1986 Determination of roll characteristics of rubber or plastic coated fabrics which was an adoption of ISO 2286 : 1972.

ISO 2286:1972 has been cancelled and replaced by ISO 2286-1:1998, ISO 2286-2:1998 and ISO 2286-3:1998.

TERMINOLOGY AND CONVERSIONS

The text of the International Standard has been accepted as suitable for publication, without deviation as a Sri Lanka Standard. However certain terminology and conversions 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 the full point at the base as the decimal marker.
- c) Wherever page numbers are quoted, they are ISO page numbers.

INTERNATIONAL
STANDARD

ISO
2286-3

First edition
1998-06-01

**Rubber- or plastics-coated fabrics —
Determination of roll characteristics —**

Part 3:
Method for determination of thickness

*Supports textiles revêtus de caoutchouc ou de plastique — Détermination
des caractéristiques des rouleaux —*

Partie 3: Méthode de détermination de l'épaisseur



Reference number
ISO 2286-3:1998(E)

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.

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.

International Standard ISO 2286-3 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

Together with the other parts (see below), it cancels and replaces ISO 2286:1986, which has been technically revised.

ISO 2286 consists of the following parts, under the general title *Rubber- and plastics-coated fabrics — Determination of roll characteristics*:

- *Part 1: Methods for determination of length, width and net mass*
- *Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate*
- *Part 3: Method for determination of thickness*

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Introduction

Compared with metals, coated fabrics are easily compressed, and the measured thickness will depend considerably upon the method and pressure employed. This is perhaps the single most important reason for having a standard method for measuring the thickness of coated fabrics.

An effort has been made to enable the results to be comparable with measurements of the thickness of textile substrates.

Rubber- or plastics-coated fabrics — Determination of roll characteristics —

Part 3: Method for determination of thickness

WARNING – Persons using this part of ISO 2286 should be familiar with normal laboratory practice. This part of ISO 2286 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This part of ISO 2286 describes a method for the determination, at a specified pressure, of the thickness of rubber- and plastics-coated fabrics, irrespective of the type of substrate employed. It is applicable to single-face, double-face and double-texture coated fabrics, as well as materials in which an expanded layer is included in the coating.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 2286. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 2286 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2231:1989, *Rubber- or plastics-coated fabrics – Standard atmospheres for conditioning and testing*.

3 Definitions

For the purposes of this part of ISO 2286, the following definitions apply.

3.1 thickness: The distance between the face and the back of a coated fabric, measured as the vertical distance between a reference plate on which the fabric rests and a parallel presser foot that is applying a pressure to the fabric.

NOTE – For convenience, the reference plate on which the fabric rests is referred to as the anvil.

3.2 usable width: That width of a coated fabric, excluding the selvedge, which is consistent in its properties, uniformly finished and free from unacceptable flaws.

4 Apparatus

4.1 Dial gauge, of the deadweight type, designed to register the vertical distance between the bearing surfaces of a presser foot and reference plate, and equipped with a dial graduated to give a direct readout of the thickness to

the nearest 0,02 mm. The gauge shall be calibrated in such a way as to permit at least one of the pressures specified in 4.2 to be obtained using at least one of the presser foot sizes.

4.2 Circular presser foot, with a smooth, flat surface and a diameter of not less than 9 mm, capable of applying one or more of the following pressures:

- a) 2 kPa \pm 0,2 kPa;
- b) 10 kPa \pm 1,0 kPa;
- c) 24 kPa \pm 2,4 kPa.

NOTES

- 1 2 kPa is the recommended pressure.
- 2 The actual pressure exerted by the presser foot may be calculated in one of the following ways:
 - a) by determining
 - 1) the force exerted by the presser foot assembly, using a calibrated counterbalance and
 - 2) the surface area of the presser foot by direct measurement
 - or
 - b) by using a tension dial gauge.

4.3 Reference plate (anvil), having a plane upper surface of diameter at least 50 mm greater than that of the presser foot.

4.4 Means for moving the presser foot in a direction normal to the upper surface of the reference plate so that its bearing surface is maintained parallel to the upper surface of the reference plate.

NOTE – The parallelism of the presser foot and anvil surfaces when brought together can conveniently be checked by inserting a feeler gauge (one only, not several together) at points round the edge of the presser foot while it is resting freely on the anvil.

5 Conditioning

Condition the fabric to be tested in accordance with ISO 2231.

6 Procedure

Before each determination, clean the surfaces of the presser foot and anvil and adjust the dial gauge to register zero when the anvil and presser foot are in contact. Make ten thickness measurements, evenly spaced across the usable width of the fabric, as follows:

Place the fabric on the anvil, ensuring that the fabric is smooth, without any accidental creases or wrinkles and without any tension. If there are intentional creases in the fabric, no attempt shall be made to smooth them out before making measurements. Lower the presser foot gently on to the fabric and allow it to rest on the fabric for 10 s. (For highly compressible materials, a 30 s time interval may be needed. This shall be reported in the test report.) Record the dial gauge reading to the nearest 0,02 mm.

If the fabric has an embossed surface, do not avoid the areas of embossing.

Do not make any measurements within 1 m of a production-manufactured roll end.

7 Expression of results

Calculate the arithmetic mean, in millimetres, of the ten determinations. Take this mean as the thickness of the coated fabric.

8 Test report

The test report shall include the following information:

- a) a reference to this part of ISO 2286;
- b) a complete description of the coated fabric;
- c) the mean, minimum and maximum thicknesses, in millimetres, of the coated fabric, the pressure at which the measurements were made, the diameter of the presser foot used and the length of time the presser foot was allowed to rest on the fabric;
- d) details of any deviations from the procedure specified;
- e) the date of the determination.

ICS 59.080.40

Descriptors: fabrics, woven fabrics, coated fabrics, fabrics coated with rubber, fabrics coated with plastics, rolls, tests, determination, thickness, dimensional measurements.

Price based on 3 pages

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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.



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.