



SLOVENSKI STANDARD

SIST EN 1735:1999

01-marec-1999

Gumirane in plastificirane tekstilije - Ugotavljanje upogibljivosti

Rubber- or plastics coated fabrics - Determination of flexibility

Mit Gummi- oder kunststoffbeschichtete Textilien - Bestimmung der Flexibilität

Supports textiles revetus de caoutchouc ou de plastique - Détermination de la souplesse

Ta slovenski standard je istoveten z: **EN 1735:1996**

[SIST EN 1735:1999](https://standards.iteh.ai/catalog/standards/sist/2cfb8160-296f-452f-86ef-8a111e713f66/sist-en-1735-1999)

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ICS:

59.080.40	Površinsko prevlečene tekstilije	Coated fabrics
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EUROPEAN STANDARD

EN 1735

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1996

ICS 59.080.40

Descriptors: coated fabrics, fabrics coated with rubber, fabrics coated with plastics, tests, determination, flexibility

English version

**Rubber- or plastics coated fabrics - Determination
of flexibility**

Supports textiles revêtus de caoutchouc ou de plastique - Détermination de la souplesse
Mit Gummi- oder kunststoffbeschichtete Textilien - Bestimmung der Flexibilität

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 1997, and conflicting national standards shall be withdrawn at the latest by May 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This standard specifies two methods for determination of the flexibility of fabrics coated with rubber or plastics. Method 1 of this standard describes the flat loop method and method 2 the method of bending length.

This standard does not apply to coated fabrics which, when they are cut in small sized pieces, tend to curl or to form a spiral, neither to those which are too rigid to form a loop.

This standard is applicable : a) to the coated fabric in delivery state;
b) to a coated fabric subjected to specified treatments.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN ISO 2231 : Rubber- or plastics-coated fabrics - Standard atmospheres for conditioning and testing (ISO 2231 : 1989)

EN 22286 : Rubber- or plastics-coated fabrics - Determination of roll characteristics (ISO 2286 : 1986)

3 Method 1 : Flat loop method

3.1 Principle

Formation of a loop from a rectangular strip of coated fabric, placed on a horizontal plane, by superposing the two ends which are then held together under a steel bar. Measurement of the height of the loop.

The flexibility is characterized by the height of the loop; this is an inverse measure and the lower the loop height the greater the flexibility.

3.2 Apparatus (see figure 1)

The apparatus shall consist of :

3.2.1 Flat rectangular board. The board is equipped near one of its ends with a shoulder having its face perpendicular to the board.

NOTE : The dimensions shown in the figure are given as an example; they can be increased to permit the installation of several test specimens on the same board.

3.2.2 Steel bar, of stainless steel or non-corrosive steel, having a length of approximately 200 mm and a square section of approximately 20 mm side.

3.2.3 Rule, graduated in millimetres.

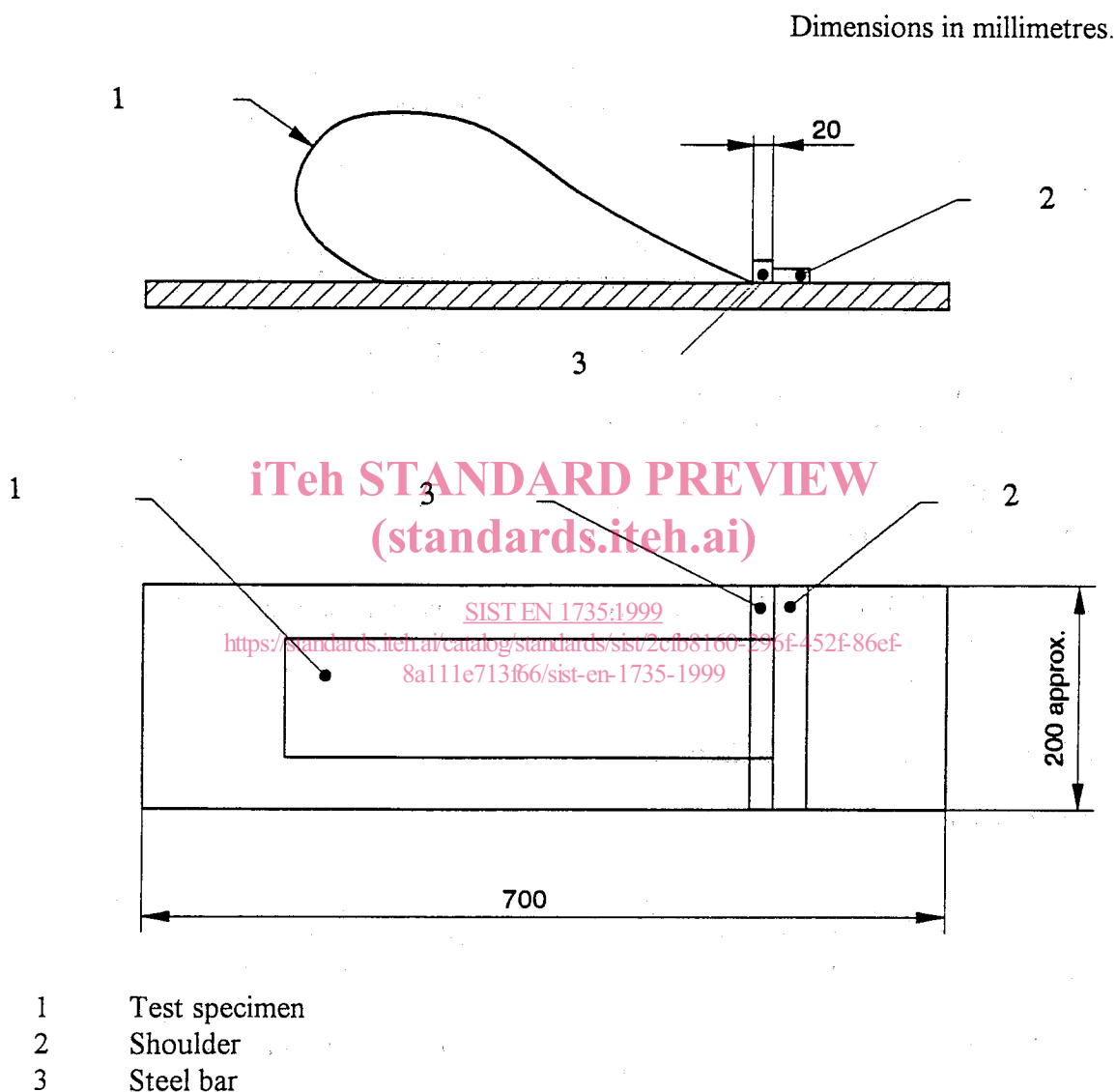


Figure 1: Apparatus

3.3 Atmosphere for conditioning and testing

The temperature of the test pieces has a strong influence on the value of flexibility. Therefore it is necessary to condition them for at least 24 h in one of the standard atmospheres defined in EN ISO 2231 and to carry out the test in the same atmosphere.

To avoid any deformation of the test specimens, they shall be placed, during conditioning, on a horizontal surface, the face that is to form the outside of the loop being turned upwards.

3.4 Test specimens

3.4.1 Shape and dimensions

The test specimen shall have the shape of a rectangle, 600 mm \pm 5 mm long and 100 mm \pm 2 mm wide.

3.4.2 Number

Use three test specimens cut in the longitudinal direction and three test specimens cut in the transverse direction.

3.4.3 Sampling

The test specimens shall be cut in the usable width of the roll according to EN 22286.

3.5 Procedure

Powder the surface of the board (3.2.1) evenly with zinc stearate or talcum. Holding the end of the test specimen between the fingers, place it on the board so that one side rests on the board and one end is against the shoulder (the choice of the side depends on the use of the product; it is subject to agreement between the interested parties; the test may also be repeated after having reversed the test specimen side for side).

Bring the other end onto the first end (so as to form a loop), pressing it also against the shoulder.

Place the steel bar (3.2.2) on the superimposed ends.

Keep the test specimen in this position for 5 min \pm 0,5 min.

Measure, with the rule (3.2.3), the maximum heights of the two edges of the loop for each of the test specimens with respect to the board.

3.6 Expression of results

3.6.1 For each of the two directions there are three test specimens (see 3.4.2).

3.6.2 For each test specimen cut in the longitudinal direction, express in millimetres the maximum height of each of the two edges of the loop formed. Take the arithmetic mean of the six values obtained as the result for the longitudinal direction.

3.6.3 Repeat the procedure described for test specimens cut in the transverse direction.

3.7 Test report

The test report shall include the following :

- a) reference to this Standard;
- b) conditioning and testing atmosphere;
- c) full identification of the product tested;
- d) indication or reference to the side (s) on which the results have been obtained;
- e) individual values obtained;
- f) arithmetical mean of the results for each test specimen :
 - 1) for those cut in the longitudinal direction, on the face;
 - 2) for those cut in the longitudinal direction, on the back side;
 - 3) for those cut in the transverse direction, on the face;
 - 4) for those cut in the transverse direction, on the back side.
- g) whether the test was conducted on coated fabric as delivered or after it had undergone specified treatments (give details);
- h) any deviation, by agreement or otherwise, from the procedure specified.

4 Method 2 : Bending length

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4.1 Principle <https://standards.iteh.ai/catalog/standards/sist/2cfb8160-296f-452f-86ef-8a111e713f66/sist-en-1735-1999>

A rectangular strip of coated fabric is supported on a horizontal platform. When this strip is moved on the platform, the end leaves the platform then bends down under its own weight. When the strip is sufficiently advanced, the end reaches an inclined plane. The bending length is the length of the test specimen between the edge of the platform and the point 0 of the rule. This length is given by a direct reading of the rule, when no slippage occurs.

4.2 Apparatus

The essential features of the flexometer used are shown in figure 2.

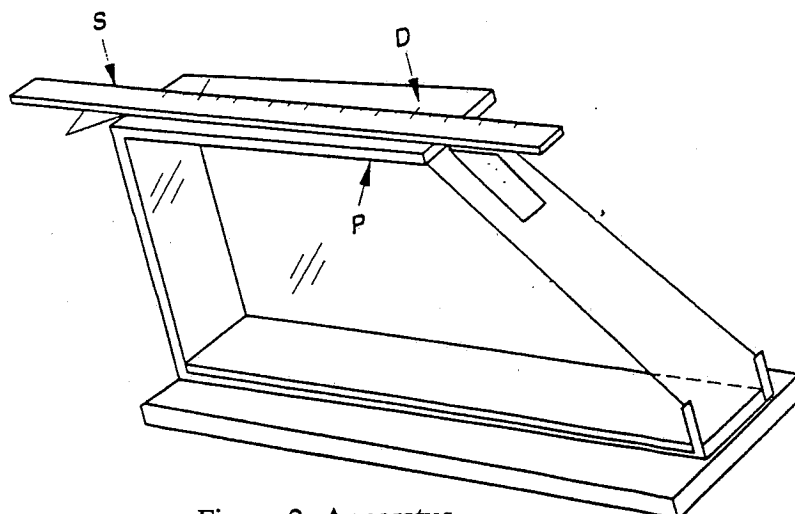


Figure 2: Apparatus

4.2.1 Horizontal platform

The horizontal platform P is treated on its upper face to ensure the easy slippage of the test specimen.

4.2.2 Graduated rule

The graduated rule S shall be rigid (a piece of metal, approximately 25 mm width, is suitable).

The under surface of S is covered with a layer of high friction material, such as a sheet of rubber so that when S is moved, it will carry forward the test specimens placed between the slide and the surface P.

4.2.3 Inclined plane

The inclined plane forms an angle of $41^{\circ}30' \pm 30'$ below the horizontal (the measurement range is governed by the size of the device).

4.3 Atmosphere for conditioning and testing

The temperature of the test specimens has a strong influence on the value of flexibility. Therefore it is necessary to condition them for at least 24 h in one of the standard atmospheres defined in EN ISO 2231 and to carry out the tests in the same atmosphere. To avoid any deformation of the test specimens, they shall be placed, during conditioning, on a horizontal surface, the face that is to be upwards on the flexometer being turned upwards.

4.4 Test specimens

4.4.1 Form and dimensions

The test specimens shall be rectangular, $25 \text{ mm} \pm 1 \text{ mm}$ wide and of such a length that it allows bending length measurements. A length of 200 mm is generally sufficient.

4.4.2 Number

Use 10 test specimens cut in the longitudinal direction and 10 test specimens cut in the transverse direction.