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SIST EN 12034:1997

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EUROPEAN STANDARD

EN 12034

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 83.180

Descriptors: adhesive tapes, tests, dimensional measurement, length, elongation at break

English version

**Self adhesive tapes - Measurement of the length
of a roll of adhesive tape**Rubans auto-adhésifs - Mesure de la longueur
d'un rouleau de ruban adhésifKlebebänder - Messung der Länge einer
Klebebandrolle**(standards.iteh.ai)**SIST EN 12034:1997<https://standards.iteh.ai/catalog/standards/sist/04179b93-5ff42fe-8863-4f65266ac5b0/sist-en-12034-1997>

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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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CENEuropean 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 253 "Self adhesive tapes", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 1996, and conflicting national standards shall be withdrawn at the latest by November 1996.

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 a method to measure the length of adhesive tape on a roll.

For non extensible adhesive tapes the length measured by this method shall be the same as the length after unrolling. For extensible adhesive tapes the length after unrolling shall be greater if the adhesive tape is stretched irreversibly by unrolling. It is also possible for an extensible adhesive tape to measure less after unrolling if stress built in during manufacture recovers after unrolling.

This is important for all adhesive tapes with elongation at break of 80 % or greater.

Provision is made for either including in or excluding from the total length the length of that portion of adhesive tape that is in direct contact with the core.

2 Principle

The length is calculated from a measurement of the number of turns of adhesive tape on the roll and a measurement of the outer circumference of the roll of adhesive tape and the outer circumference of the core.

3 Apparatus (see figure 1)

3.1 Measuring device

Which is capable of counting both whole revolutions and part revolutions which is continuously driven by a spindle. The spindle carries a suitable locking device by which means a wedge shaped shaft to suit the various internal diameters of cores of the rolls of adhesive tape can be quickly fitted. (The wedge shaped shaft, for example, for a nominal 25 mm internal diameter core will go from 24,5 mm diameter to 26,5 mm diameter over a shaft length of 50 mm.)

3.2 Measuring tape

A narrow, flexible, steel tape graduated in mm.

4 Test piece

One roll of adhesive tape.

5 Procedure

5.1 Standard test conditions

The test shall be carried out at $23\text{ °C} \pm 2\text{ °C}$ and $50\% \pm 5\%$ relative humidity.

5.2 Measure the circumference in millimeters (C_R) of the roll by means of a steel tape, applying the steel tape to the roll like a belt.

5.3 Mount the roll on the wedge shaped shaft of the counter. Set the counter to zero and pull the adhesive tape from the roll in a direction perpendicular to the counter spindle. Remove all the adhesive tape from the core and record N the number of revolutions (to the nearest tenth of a revolution) as read from the counter when the last layer of adhesive tape has left the core.

5.4 Measure the circumference of the core in millimeters (C_0).

6 Expression of results

Calculate L the length of the adhesive tape as follows :

$$L \text{ (metres)} = \frac{N}{2000} (C_R + C_0)$$

If the length of adhesive tape in contact with the core is not to be included in the total length, then :

$$L \text{ (metres)} = \frac{N}{2000} (C_R + C_0) - \frac{C_0}{1000}$$

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7 Test report

The test report shall include the following information :

- a) a reference to this European Standard ;
- b) all information necessary to identify the test sample ;
- c) the date of the test ;
- d) the results obtained ;
- e) any operation not specified in this European Standard which may influence the results.

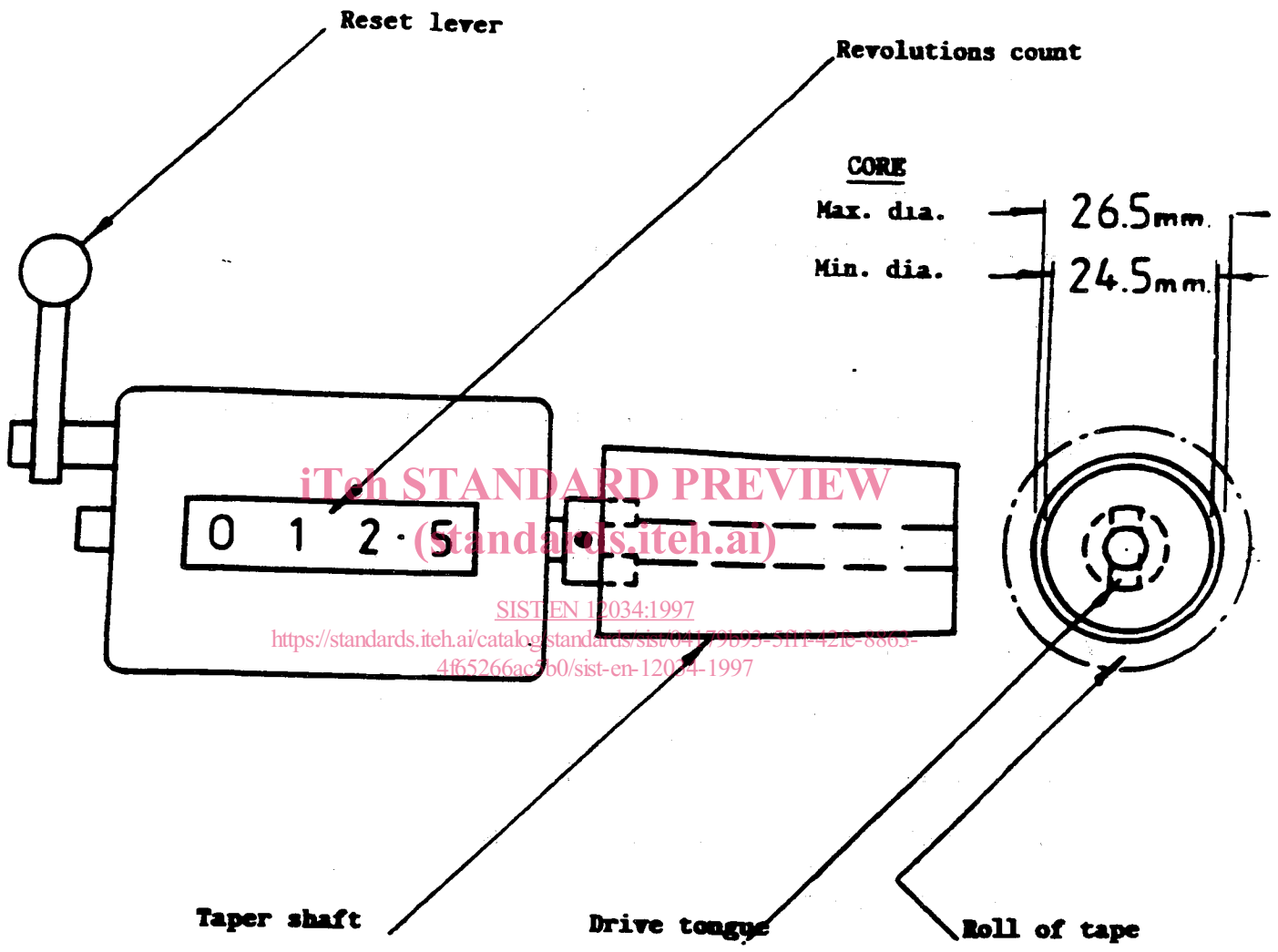


Figure 1 : Measuring device