SLOVENSKI STANDARD
SIST EN 1721:2000

01-maj-2000

Lepila za papir in karton, za embalaġo in za odpadne higienske proizvode - Merjenje sledi lepil, obļ utljivih na pritisk - Doloļ anje sledi kotaleļ e se kroglice

Adhesives for paper and board, packaging and disposable sanitary products - Track measurement for pressure sensitive adhesives - Determination of rolling ball track

Klebstoffe für Papier, Verpackung und Hygieneprodukte - Messung der Oberflächenklebrigkeit von Haftklebstoffen - Bestimmung der Oberflächenklebrigkeit nach der Methode "Rollende Kugel"

Adhésifs pour papier et carton, emballages et produits sanitaires consommables - Mesurage de l'adhésivité des produits autoadhésifs - Détermination de l'adhésivité d'une bille roulante

Ta slovenski standard je istoveten z: **EN 1721:1998**

ICS:

83.180	Lepila	Adhesives

SIST EN 1721:2000 **en**

EUROPEAN STANDARD
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EN 1721

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ICS 83.180

Descriptors: adhesives, tests, measurements, adhesive strength, balls, procedures

English version

Adhesives for paper and board, packaging and disposable sanitary products - Tack measurement for pressure sensitive adhesives - Determination of rolling ball tack

Adhésifs pour papier et carton, emballages et produits sanitaires consommables - Mesurage de l'adhésivité des produits autoadhésifs - Détermination de l'adhésivité d'une bille roulante

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This European Standard was approved by CEN on 25 September 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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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Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 193 "Adhesives", the secretariat of which is held by AENOR.

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 April 1999, and conflicting national standards shall be withdrawn at the latest by April 1999.

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

1 Scope

This test method specifies a "Rolling Ball Tack" test method for coated pressure sensitive adhesives.

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 923 Adhesives - Tems and definitions

EN 1066 Adhesives - Sampling

EN 1067 Adhesives - Examination and preparation of samples for testing

3 Definition

For the purpose of this standard the definitions in accordance with EN 923 and the following definition apply:

3.1 rolling ball tack: The distance a specified rolling ball travels on an adhesive layer before stopping, after it has been allowed to roll down a defined incline.

4 Safety

Persons using this standard shall be familiar with normal laboratory practice.

This standard does not purport to address all the safety problems, if any, associated with its use.

It is the responsibility of the user to establish safety and health practices and to ensure compliance with any European and national regulatory conditions.

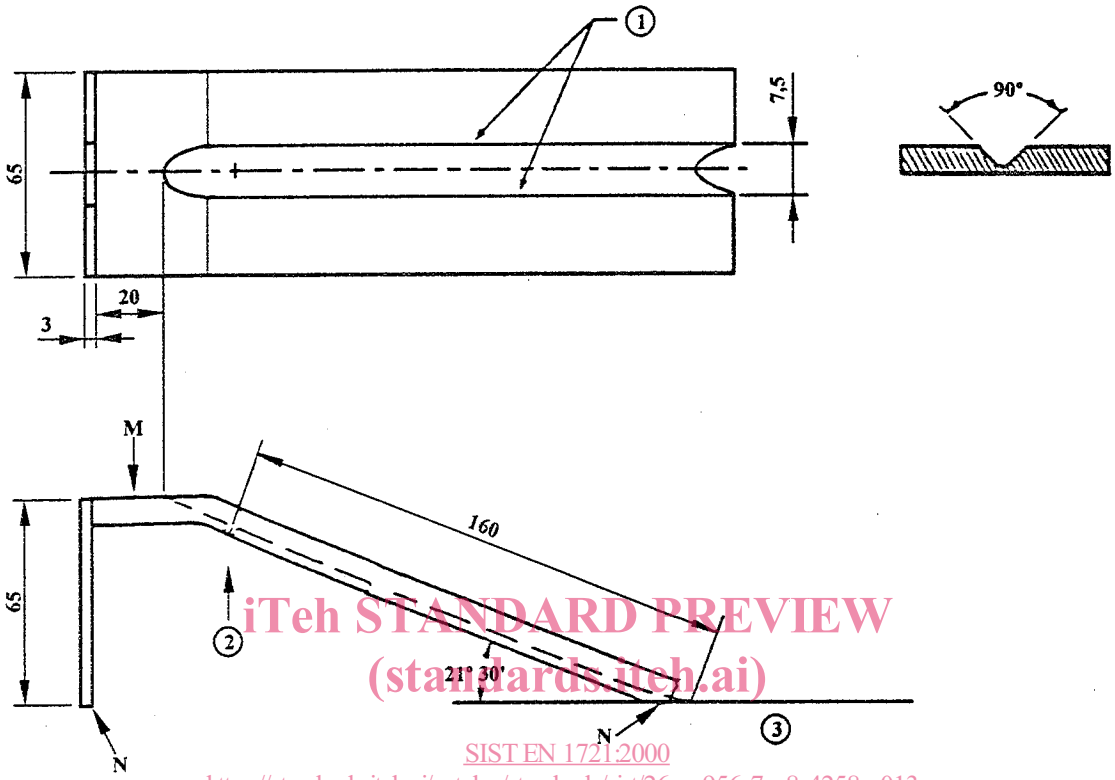
5 Test equipment

5.1 An inclined trough, equipped with a release lever at the top through which the ball gains downhill momentum.

5.2 A solid ball, with 10 mm diameter made of stainless steel which shall be thoroughly cleaned.

The equipment is described in Figures 1 and 2.

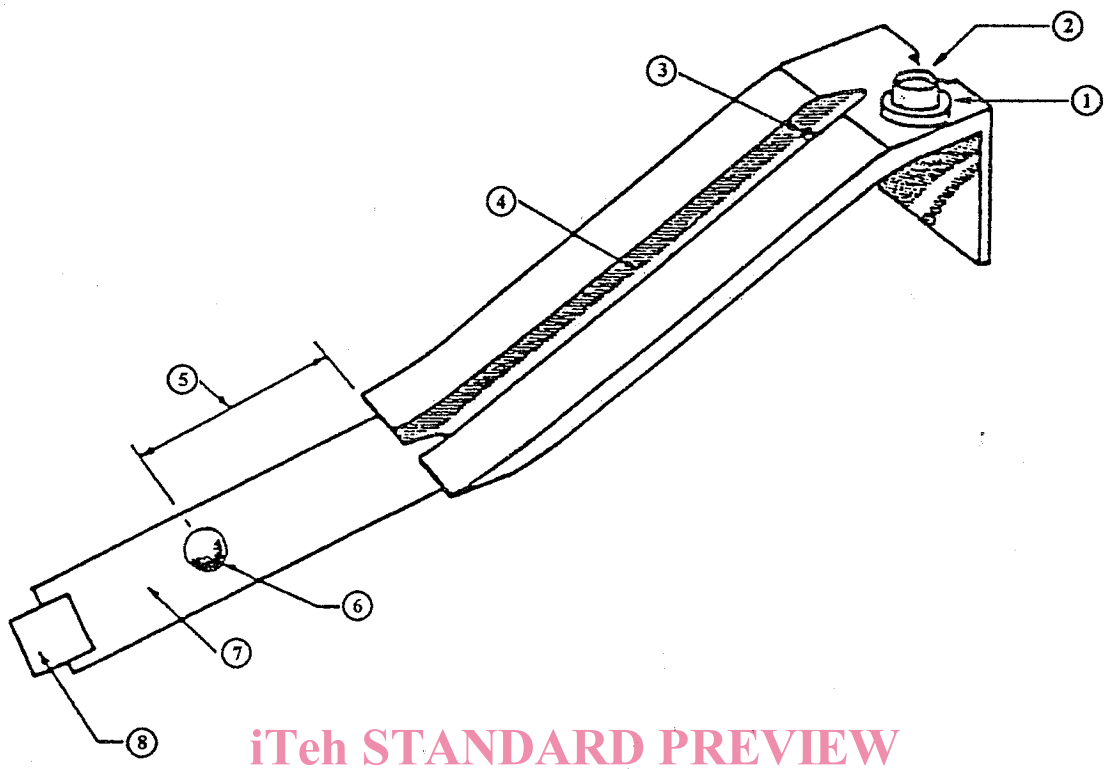
Dimensions in millimetres



SURFACES M AND N MUST BE PARALLEL

1 these two edges to be parallel
2 release position
3 adhesive layer

Figure 1: Incline for rolling ball test



1 circular spirit level
2 release level
3 release
4 inclined trough
5 distance between end of incline and ball
6 10 mm diameter, steel ball
7 Adhesive coating
8 Hold down tape or weight

Figure 2: Apparatus and specimen showing distance of roll that is measured

5.3 A test table, with a hard horizontal surface e.g. a metal or glass plate.

5.4 Suitable equipment for the preparation of an adhesive coating, with a consistent dry coating weight of (25 ± 2) g/m^2. Deviation from this coating weight shall be reported.

6 Materials

6.1 Adhesive

Sampling shall be carried out in accordance with EN 1066 and preparation of samples in accordance with EN 1067.

6.2 **Polyester film,** with a thickness of 50 µm

6.3 **Release paper**

7 Preparation and conditioning of test pieces

Coat the adhesive sample onto the polyester film to produce a consistent coating of (25 ± 2) g/m^2. Deviation from this coating weight shall be reported.

Cover this coating with release paper.

Coating and drying of the adhesive shall conform to the appropriate commercial practice.

NOTE: A transfer coating technique can also be used.

Test specimens are strips taken from the coated polyester film and generally about 50 mm wide and approximately 380 mm long. Specific dimensions can be selected for the adhesive to be tested since the length needs only to be sufficient to allow the adhesive to stop the ball, and the width needs to be only wide enough to encompass the ball track.

A minimum of 5 tests specimens shall be prepared.

The adhesive coatings shall be conditioned for (24 ± 4) h before testing at standard climate of (23 ± 2) °C and (50 ±5)% R.H.

Prior to use the cleaned balls shall be left for a minimum of 30 min under the same conditions. Balls shall only be handled using tools.

8 Test procedure

The test shall be performed at standard climate as described in clause 7.

Prior to each test ensure that the inclined trough is clean.

Arrange the strips to be tested with the adhesive coating uppermost in line with the inclined trough.

The strips shall be free of any wrinkles, creases, or splices. The end of the strips opposite the incline shall be held to the table with a tape or a weight as shown in Figure 2. Only one test shall be run on each strip.

For each test a new cleaned and conditioned ball is placed with a suitable tool on the upper side of the release of the inclined trough.

Release the ball and allow it to roll to a stop on the adhesive.

Measure the distance in millimetres from the centre of contact between the ball and adhesive to the near end of the incline.