SLOVENSKI STANDARD
SIST EN 14713:2006

01-januar-2006

Lepila za papir in karton za embalaģo in za higienske proizvode za enkratno uporabo ï Doloļ anje frikcijskih lastnosti filmov, ki naj bi bili sposobni lepljenja

Adhesives for paper and board, packaging and disposable sanitary products - Determination of friction properties of films potentially suitable for bonding

Klebstoffe für Papier und Pappe, Verpackung und Hygieneprodukte - Bestimmung des Reibungsverhaltens potentiell klebefähiger Schichten

Adhésifs pour papier et carton, emballage et produits sanitaires jetables - Détermination des propriétés de frottement de films potentiellement adaptés au collage

Ta slovenski standard je istoveten z: **EN 14713:2005**

ICS:

83.180	Lepila	Adhesives

SIST EN 14713:2006 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14713

August 2005

ICS 83.180

English Version

Adhesives for paper and board, packaging and disposable sanitary products - Determination of friction properties of films potentially suitable for bonding

Adhésifs pour papier et carton, emballage et produits sanitaires jetables - Détermination des propriétés de frottement de films potentiellement adaptés au collage

Klebstoffe für Papier und Pappe, Verpackung und Hygieneprodukte - Bestimmung des Reibungsverhaltens potentiell klebefähiger Schichten

This European Standard was approved by CEN on 8 July 2005.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 14713:2005: E

Contents

Foreword

This European Standard (EN 14713:2005) 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 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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

Introduction

The friction behaviour is described by a characteristic coefficient of friction, independent of the test apparatus and test conditions. As the coefficient of friction of potentially adhesive films or layers may be a function of the normal force, F_N , and the contact surface and, in the case of dynamic friction, also of the relative speed and other dynamic parameters, these parameters have also been specified in this European Standard.

The tests can be carried out with the potentially adhesive layers sliding over themselves or coated side over the reverse side of a substrate or other surfaces of metals or plastics.

The coefficient of friction does not allow a comprehensive assessment to be made of the machinability on packaging or processing machines as under the conditions encountered in practice, the friction phenomena are generally accompanied by other effects, e. g. electrostatic charges, air cushion, local rise of temperature, abrasion, etc.

1 Scope

This European Standard specifies test methods to assess the coefficients of friction of potentially adhesive films or layers, such as coatings with reactivable adhesives, hot melts or waxes, for use with paper and board, packaging and disposable sanitary products.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 923:1998, *Adhesives – Terms and definitions*

EN 1067, *Adhesives – Examination and preparation of samples for testing*

EN ISO 15605, *Adhesives – Sampling (ISO 15605:2000)*

ISO 554, *Standard atmospheres for conditioning and/or testing – Specifications*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 923:1998 and the following apply.

3.1
friction
resistance against sliding of two surfaces in contact with each other

NOTE A distinction is made between static friction and dynamic friction.

3.2
static friction
threshold value of the friction between two relatively static bodies, where the force applied is insufficient to cause relative motion which has to be overcome at the onset of sliding motion

3.3
dynamic friction
friction between two bodies in relative motion to each other which remains after the static friction has been overcome at the given sliding speed

3.4
static frictional force
(F_S)
force necessary to overcome the static friction

3.5
dynamic frictional force
(F_D)
force necessary to overcome the dynamic friction

3.6
normal force
(F_N)
force acting perpendicularly to the two surfaces in contact

3.7
coefficient of friction
ratio of the frictional force to the normal force

3.8
static coefficient of friction
(μ_S)
ratio of the static frictional force to the normal force

3.9
dynamic coefficient of friction
(μ_D)
ratio of the dynamic frictional force to the normal force

4 Safety

Persons using this European Standard shall be familiar with normal laboratory practice.

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

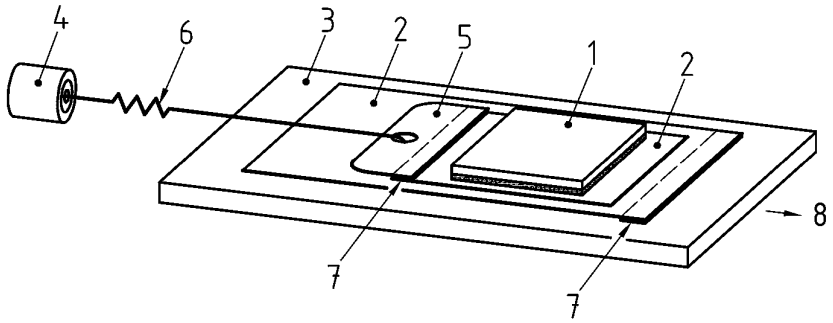
It is the responsibility of the user to establish health and safety practices and to ensure compliance with any European or regulatory conditions.

5 Apparatus

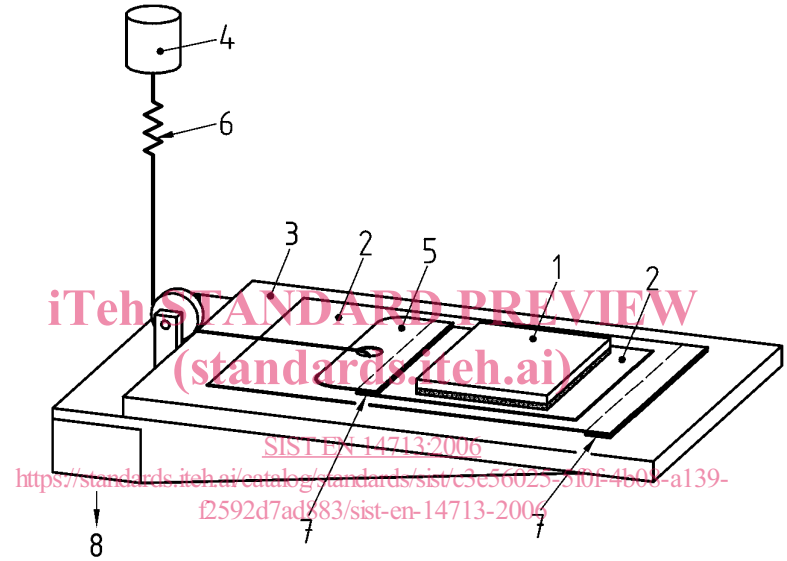
The test apparatus consists generally of a driving mechanism to produce a uniform relative motion between two sliding surfaces and a load cell to record the frictional force.

The relative motion between the two surfaces may be produced in any suitable way, e.g. by means of a moving table (see Figure 1a)) or by moving the measuring device in the opposite direction. Even the vertical motion of a tensile testing machine may be utilized if the frictional force or the motion that induces the friction is deflected in the vertical direction by a pulley (see Figure 1b)).

The force is recorded continuously by means of a suitable recording device.



a) horizontal motion



b) vertical motion

Key for Figure 1 a) and b)

1 Sledge
2 Test specimens
3 Testing table (rigid or movable)
4 Load cell
5 Reinforcement plate
6 Spring
7 Double-faced adhesive tape
8 Direction of motion

Figure 1 — Test apparatus for the determination of friction properties