



SLOVENSKI STANDARD

SIST EN 15062:2006

01-julij-2006

Adhézivji za kožo in oblačilne materiale - Topilno- in disperzijske adhezivje -
Preizkušnje staranja spojev pod določenimi pogoji

Adhesives for leather and footwear materials - Solvent-based and dispersion adhesives -
Testing ageing of bonds under specified conditions

Klebstoffe für Leder und Schuhwerkstoffe - Lösemittel- und Dispersionsklebstoffe -
Prüfung der Alterung von Klebungen unter festgelegten Bedingungen

iTeh STANDARD PREVIEW

Adhésifs pour cuir et matériaux de la chaussure - Adhésifs à base de solvant et en
dispersion - Essai de vieillissement des collages dans des conditions spécifiées

[SIST EN 15062:2006](https://standards.iteh.ai/catalog/standards/sist/f0ef7e9-6a87-44f9-8574-c062ca65667/sist-en-15062-2006)

Ta slovenski standard je istoveten z: [EN 15062:2006](https://standards.iteh.ai/catalog/standards/sist/f0ef7e9-6a87-44f9-8574-c062ca65667/sist-en-15062-2006)

ICS:

61.060

83.180

SIST EN 15062:2006

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 15062:2006

[https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-
eb62cad65667/sist-en-15062-2006](https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-eb62cad65667/sist-en-15062-2006)

English Version

Adhesives for leather and footwear materials - Solvent-based
and dispersion adhesives - Testing ageing of bonds under
specified conditions

Adhésifs pour cuir et matériaux de la chaussure - Adhésifs
à base de solvant et en dispersion - Essai de vieillissement
des collages dans des conditions spécifiées

Klebstoffe für Leder und Schuhwerkstoffe - Lösemittel- und
Dispersionsklebstoffe - Prüfung der Alterung von
Klebungen unter festgelegten Bedingungen

This European Standard was approved by CEN on 23 March 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-eb62cad65667/sist-en-15062-2006>



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

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

Contents		Page
Foreword		3
Introduction		4
Safety statement		4
1 Scope		5
2 Normative references		5
3 Terms and definitions		5
4 Principle		5
5 Ageing tests		6
6 Adhesive and materials		7
7 Apparatus and reagents		7
8 Test specimens		8
9 Procedure		8
10 Evaluation and expression of results		9
11 Test report		10
Bibliography		11

iTeh STANDARD PREVIEW
(standards.iteh.ai)
[https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-
eb62cad65667/sist-en-15062-2006](https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-eb62cad65667/sist-en-15062-2006)

Foreword

This document (EN 15062:2006) 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 November 2006, and conflicting national standards shall be withdrawn at the latest by November 2006.

This document, together with EN 1392:2006, supersedes EN 1392:1998.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 15062:2006

[https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-
eb62cad65667/sist-en-15062-2006](https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-eb62cad65667/sist-en-15062-2006)

Introduction

The performance of adhesive bonds in footwear may deteriorate in storage or in wear. Such deterioration may be caused or influenced either by internal factors like specific material properties (e.g. water absorption) and/or material constituents (e.g. plasticizers) and/or external factors like heat, moisture, oil or aggressive liquids.

Therefore one single standard cannot cover all the various detrimental influences met in practice. This standard describes laboratory test methods applying specified ageing conditions to simulate and to assess the deterioration of adhesive bonds which may occur as part of usual footwear worn and stored in normal practice by natural ageing.

For adhesive bonds which are parts of footwear intended to be exposed e.g. to extreme external ageing conditions (e.g. shoes for specific work, sport shoes) specific tests have to be worked out and agreed taking into account the conditions given.

For the determination of a deterioration of adhesive bonds caused by ageing in this standard the peel resistance measured according to EN 1392 is used. For a more comprehensive evaluation of ageing effects found, e.g. in research or development work, another test like the creep test may be additionally applied.

Safety statement

Persons using this document should be familiar with the normal laboratory practice, in principle. This document 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 regulatory conditions.

SIST EN 15062:2006

<https://standards.iteh.ai/catalog/standards/sist/f0efc7e9-6a87-44f9-8574-eb62cad65667/sist-en-15062-2006>

1 Scope

This European Standard describes a number of test methods simulating under specified conditions the normal natural ageing of bonds prepared from footwear materials by use of solvent based and dispersion adhesives.

It applies to adhesive bonds as part of normal worn and stored footwear in normal practice.

2 Normative references

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

EN 923:2005, *Adhesives - Terms and definitions*

EN 1392, *Adhesives for leather and footwear materials - Solvent-based and dispersion adhesives – Test methods for measuring the bond strength under specified conditions*

EN ISO 868, *Plastics and ebonite – Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

EN ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

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

ISO 5725-1, *Accuracy (trueness and precision) of measurement methods and results – Part 1: General principles and definitions*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results – Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method.*

ISO 5725-3, *Accuracy (trueness and precision) of measurement methods and results – Part 3: Intermediate measures of the precision of a standard measurement method*

ISO 5725-4, *Accuracy (trueness and precision) of measurement methods and results – Part 4: Basic methods for the determination of the trueness of a standard measurement method*

ISO 5725-5, *Accuracy (trueness and precision) of measurement methods and results – Part 5: Alternative methods for the determination of the precision of a standard measurement method*

ISO 5725-6, *Accuracy (trueness and precision) of measurement methods and results – Part 6: Use in practice of accuracy values*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005 apply.

4 Principle

Test specimens prepared under controlled conditions in the laboratory are subjected to specified ageing conditions. After ageing the peel resistance of the test specimens is determined and compared with the peel resistance obtained from control test specimens which have not been subjected to ageing.

5 Ageing tests

Table 1 lists some ageing tests developed to simulate natural ageing of bonds prepared from footwear materials. The procedures for carrying out these tests are described in Clause 9.

Table 1 - Ageing tests

Designation of the ageing test	Subclause	Storing condition or cycle	Code of the ageing test
Control test	9.1	4 d at 23/50*	P(4d)
Warm air ageing test	9.2	4 d at 23/50* + 7 d at 50 °C + 4 d at 23/50*	P(4d)7d50(4d)
Wet ageing test	9.3	4 d at 23/50* + 6 h immersed in water at 23 °C	P(4d)6hW23
Wet/dry ageing test	9.4	4 d at 23/50* + 6 h immersed in water at 23 °C + 4 d at 23/50*	P(4d)6hW23(4d)
Moist ageing test	9.5	4 d at 23/50* + 7 d immersed in water at 40 °C	P(4d)7dW40
Moist/dry ageing test	9.6	4 d at 23/50* + 7 d immersed in water at 40 °C + 4 d at 23/50*	P(4d)7dW40(4d)
Humid ageing test	9.7	4 d at 23/50* + 14 d at 40 °C and 90 % to 100 % humidity	P(4d)14dH40
Humid/dry ageing test	9.8	4 d at 23/50* + 14 d at 40 °C and 90 % to 100 % humidity + 4 d at 23/50*	P(4d)14dH40(4d)

* standard atmosphere 23/50 according to ISO 554

The "Warm air ageing test" (see 9.2) serves particularly for the assessment of effects on bonds which are accelerated by heat and caused by ingredients of the materials bonded.

"Wet ageing tests" (see 9.3 and 9.4) are of most value for assessing an ageing of bonds prepared by ancillary adhesives, e.g. used for bonding insole ribs and toe puffs.

"Moist ageing tests" (see 9.5 and 9.6) reproduce the effect of repeated wetting of sole bonds in everyday worn footwear under regular service conditions.

"Humid ageing tests" (see 9.7 and 9.8) simulate the effect of prolonged warm damp environmental conditions (as in the tropics) on the bond.

With respect to other practical requirements mode and time of storage or ageing cycles may be modified. All modifications shall be recorded in the test report.

Conclusions on behaviour under other conditions than specified in Table 1 shall be only valid if sufficiently supported by practical requirements and by results of studies on repeatability and reproducibility of the modified test according to ISO 5725 (All parts).

6 Adhesive and materials

6.1 Adhesive

Identify the adhesive under test in the test report, in particular record name and/or designation, manufacturer, date of manufacture/supply and/or lot number, main polymer and colour. For two-part adhesives identify the nature of the crosslinking agent and the mixing ratio of the components.

If a reference test adhesive with specified properties is used (see prEN 15307:2005, Annex A), note its designation, source and date of supply in the test report.

6.2 Materials

Identify type of upper and soling material used for testing. Record name and/or designation, manufacturer, date of manufacture/supply. For leathers list colour, thickness and type of tannage (if known), for rubber and plastic materials colour, polymer base and Shore-hardness according to EN ISO 868. Include this identification of the material in the test report.

If reference footwear test material(s) with specified properties are used (see prEN 15307:2005, Annex A), record the designation, source and date of supply of the reference footwear test material(s) in the test report.

7 Apparatus and reagents

Apparatus described in EN 1392 for preparing the test specimens required, for measuring their peel resistance, and in addition:

7.1 warm air cabinet with forced ventilation capable of maintaining the required number of test specimen for warm air ageing (9.2) at temperatures (50 ± 2) °C or a glass container (7.2) required for moist ageing (see 9.5 and 9.6) at (40 ± 2) °C.

7.2 glass container of sufficient capacity for storing the required number of test specimens during the wet and for moist ageing tests (see 9.3. to 9.6). This container has to be capable of being evacuated to 5 kPa.

7.3 water of grade 3 according to EN ISO 3696 for storing the test specimens during the wet and moist ageing test (see 9.3 to 9.6).

7.4 device for evacuation of air from the glass container (7.2).