SLOVENSKI STANDARD
SIST EN 14256:2007

01-november-2007

Lepila za nekonstrukcijsko uporabo - Preskusne metode in zahteve za odpornost proti statiļ ni obremenitvi

Adhesives for non-structural wood applications - Test method and requirements for resistance to static load

Holzklebstoffe für nicht tragende Anwendungen - Prüfverfahren und Anforderungen an die Beständigkeit gegen statische Belastung

Adhésifs pour bois a usages non structuraux - Méthode d'essai et exigences pour la résistance a la charge statique

Ta slovenski standard je istoveten z: **EN 14256:2007**

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83.180	Lepila	Adhesives

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English Version

Adhesives for non-structural wood applications - Test method and requirements for resistance to static load

Adhésifs pour bois à usages non structuraux - Méthode d'essai et exigences pour la résistance à la charge statique

Holzklebstoffe für nicht tragende Anwendungen - Prüfverfahren und Anforderungen an die Beständigkeit gegen statische Belastung

This European Standard was approved by CEN on 23 June 2007.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents

Page

Foreword

This document (EN 14256:2007) 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of an identical text or by endorsement, at the latest by February 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, 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.

Safety statement

Persons using this document should be familiar with the normal laboratory practice, if applicable. 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.

1 Scope

This European Standard specifies a method for determining the ability of a test piece bonded with a thermoplastic adhesive, to support a given load for a specified time without fracture or excessive distortion, and specifies performance requirements for mean survival time.

It should be used in conjunction with EN 204 and EN 205, which describe durability classes and corresponding test methods for non-structural wood adhesives based on their ability to withstand various water treatments and relatively rapidly applied loads. The test described in this standard may be used to assess joints made with thin glue line, as defined in EN 205.

NOTE The test described in this standard is not a mandatory requirement for the classification of adhesives into the classes D1, D2, D3 and D4 given in EN 204. It is an additional test that can be specified by a purchaser if required.

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 205:2003, *Adhesives - Wood adhesives for non-structural applications - Determination of tensile shear strength of lap joints*

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

EN 13183-1, *Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method*

EN 13183-2, *Moisture content of a piece of sawn timber - Part 2: Estimation by electrical resistance method*

3 Terms and definitions

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

4 Principle

A number of test pieces, each incorporating a symmetrical single lap joint between two rectangular wooden adherents, is placed in a jig in a climatically controlled environment. A weight is suspended from the jig applying a constant shear force to each joint for a period of 21 d. The time after which any joint fails is reported.

5 Apparatus

5.1 **Jigs**, for holding the test pieces (see Figure 1).

5.2 **Weights**, (30,0 ± 0,5) kg with means of attachment to the jigs.

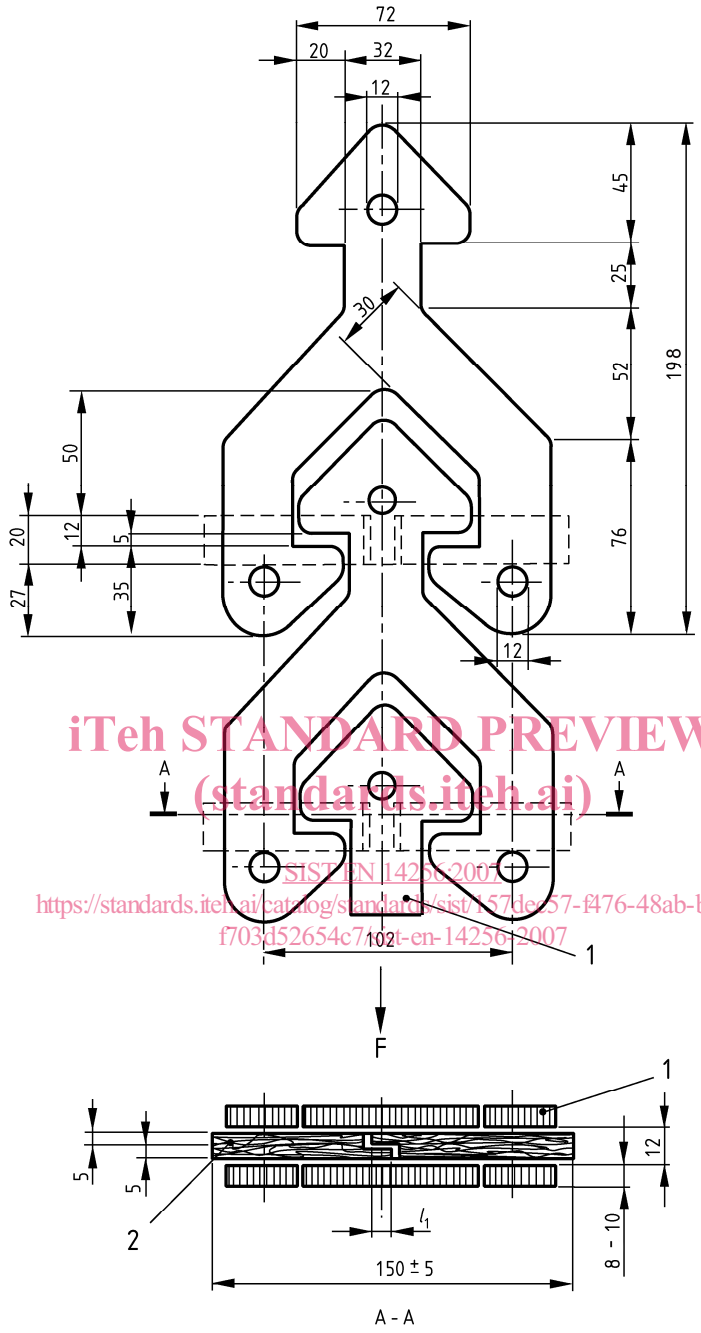
5.3 **Enclosure**, capable of maintaining the test piece assembly at (23 ± 2) °C and (50 ± 5) % relative humidity.

6 Sample preparation

6.1 Preparation of test pieces

Prepare 10 test pieces, thin line only, in accordance with 7.1 to 7.2 of EN 205:2003 but with an overlap of (20,0 ± 0,2) mm. A diagram of the test piece is given in Figure 1.

All dimensions in millimetres ± 0,5 unless otherwise stated



Key

1 Plywood (5 to 7 ply)

2 Test piece [The overlapping dimension l_1 is (20,0 ± 0,2) mm]

Figure 1 — Jig for assessing the resistance of bonded lap joints to a static load; hanging device made of 5 to 7-ply plywood

Make flat-bottomed cuts of (2,5 ± 0,5) mm width in the test pieces across the grain so that an overlap of (20,0 ± 0,2) mm is produced in the middle section, ensuring that cuts just cut through the bond-line but only penetrate as little as possible into the other part of the joint.

Apply the adhesive to be tested according to the manufacturer instructions.

Where no manufacturer instructions are available for the application of the adhesive, use the following bonding procedures:

— The adhesive application shall be on both sides of the joint.

— The adhesive spread shall be (150 ± 10) g/m^2 on each side.

— The open assembly time shall be (120 ± 10) s.

— The closed assembly time shall be (180 ± 10) s.

— The pressing pressure shall be 0,7 N/mm^2 to 1,0 N/mm^2.

— The pressing time shall be minimum of 2 h.

6.2 Conditioning bonded panels or test pieces

After bonding and pressing, condition the bonded assemblies or test pieces for a minimum of seven days but not more than eight days in the standard atmosphere that is to be used for testing, i.e. (23 ± 2) °C and (50 ± 5) % relative humidity, [23/50].

7 Test procedure

Just after the conditioning period described in 6.2, carry out the test at 23/50, testing 10 test pieces. Mount each test piece in the special jig (5.1) and suspend the jigs vertically. It is permissible to suspend one jig from another, up to a maximum of 10. Apply the required load of (30 ± 0,5) kg to the bottom of the jig assembly.

Failure is either when the test pieces are broken or when the two jigs are no longer supported by the specimen and they are in contact with each other because of the extent of its deflection.

Inspect the test pieces daily, and note the time to failure of each test piece, attributing a survival time, for example, of 3,5 d for test pieces failing between 3 d and 4 d, and 4,5 d for those failing between 4 d and 5 d, etc.

Terminate the test after 21 d, or after a mean endurance of 14 d has been achieved, whichever is the sooner. Note the failure in days of each test piece. Standard deviation should be reported in test results.

8 Calculation and expression of results

Calculate the mean survival time for the 10 test pieces and report the individual and mean survival times.

9 Performance requirements

The mean survival time shall not be less than 14 d.