



NSAI
Standards

Irish Standard
I.S. EN 14257:2019

Adhesives - Wood adhesives - Determination of tensile strength of lap joints at elevated temperature (WATT '91)

I.S. EN 14257:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 14257:2019 is the adopted Irish version of the European Document EN 14257:2019, Adhesives - Wood adhesives - Determination of tensile strength of lap joints at elevated temperature (WATT '91)

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EUROPEAN STANDARD

EN 14257

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 83.180

Supersedes EN 14257:2006

English Version

Adhesives - Wood adhesives - Determination of tensile strength of lap joints at elevated temperature (WATT '91)

Adhésifs - Adhésifs pour bois - Détermination de la résistance en traction à température élevée des joints à recouvrement (essai WATT '91)

Klebstoffe - Holzklebstoffe - Bestimmung der Klebfestigkeit von Längskleblagen im Zugversuch in der Wärme (WATT'91)

This European Standard was approved by CEN on 5 August 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 14257:2019) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by UNE.

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of an identical text or by endorsement, at the latest by March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14257:2006.

In comparison with the previous edition, the following technical modifications have been made:

- Clause 4 “Principle” revised;
- 5.1 relevant to tensile testing machine revised;
- 6.1 “Preparation of the bonded test pieces”: number of the test pieces modified;
- Clause 7 “Test procedure” revised;
- 9.3 “Preparation of the test pieces and testing procedures” revised;
- 9.4 “Test results” revised.

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.

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EN 14257:2019 (E)

1 Scope

This document specifies a method for testing the strength of wood adhesives at 80 °C.

NOTE The procedure described is based on a test developed in Germany known originally as the WATT '91 test. It uses the test piece described in EN 205.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Adhesives — Wood adhesives for non-structural applications — Determination of tensile shear strength of lap joints*

EN 923, *Adhesives — Terms and definitions*

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Principle

A symmetrical bonded lap joint between two wooden adherents is subjected to a period of heating at controlled temperature and then strained to rupture by a longitudinal force parallel to the grain.

The heating test is carried out on thin (0,1 mm) glue lines.

5 Apparatus

5.1 Tensile testing machine, as described in ISO 5893, capable of maintaining a constant strain rate. The jaws shall be mounted in such a way as to permit self-alignment whilst the test pieces are being pulled.

5.2 Fan assisted oven, capable of maintaining a temperature of $(80 \pm 2) ^\circ\text{C}$.

6 Sample preparation

6.1 Preparation of the-test pieces

Prepare 20 test pieces in accordance with the procedure described in EN 205.

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