



NSAI
Standards

Irish Standard
I.S. EN 17224:2019

Determination of compressive shear strength of wood adhesives at elevated temperatures

I.S. EN 17224:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 17224:2019

Published:

2019-07-10

This document was published under the authority of the NSAI and comes into effect on:

2019-07-28

ICS number:

83.180

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 17224:2019 is the adopted Irish version of the European Document EN 17224:2019, Determination of compressive shear strength of wood adhesives at elevated temperatures

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 17224

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2019

ICS 83.180

English Version

Determination of compressive shear strength of wood adhesives at elevated temperatures

Détermination de la résistance des adhésifs de bois au cisaillement par compression à températures élevées

Bestimmung der Druck-Scherfestigkeit von Holzklebstoffen bei erhöhten Temperaturen

This European Standard was approved by CEN on 26 May 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
European foreword.....		2
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	5
5	Apparatus.....	5
5.1	Test jig.....	5
5.2	Climate chamber or oven	5
5.3	Thermocouples	6
5.4	Testing machine	6
6	Test specimens.....	6
6.1	Selection of wood	6
6.2	Preparation of test pieces	6
7	Test procedure	9
7.1	Test at ambient temperature.....	9
7.2	Test at elevated temperature	10
7.3	Evaluation of result	11
8	Expression of results and test report.....	12
Bibliography.....		13

European foreword

This document (EN 17224:2019) 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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 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.

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

EN 17224:2019 (E)

Introduction

Safety statement

Persons using this document should be familiar with the normal laboratory practice, if applicable. This document cannot 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.

Environmental statement

It is understood that some of the material permitted in this document can have negative environmental impact. As technological advantages lead to better alternatives for these materials, they will be eliminated from this document to the extent possible.

At the end of the test, the user of the document should take care to carry out an appropriate disposal of the wastes, according to local regulation.

1 Scope

This document specifies a test method for determining the comparative compression shear strength of adhesive bonds and solid wood at both ambient temperature and elevated temperature. The maximum load of the test pieces at ambient temperature and after exposure to a specific elevated temperature for a specified duration of time is evaluated. It is applicable to adhesives used in load bearing timber structures and to other wood adhesives.

This method is intended primarily to obtain performance data for the influence of elevated temperatures on the behaviour of adhesive bonds.

This method is not intended to provide data for structural design, and does not necessarily represent the performance of the bonded element in service.

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 923, *Adhesives — Terms and definitions*

EN 14080:2013, *Timber structures — Glued laminated timber and glued solid timber — Requirements*

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 <http://www.iso.org/obp>

4 Principle

Solid wood test pieces and adhesively bonded test pieces are prepared. Both types of test pieces are tested in a compression shear test according to EN 14080:2013, Annex D at ambient temperature and after exposure to an elevated temperature. The compression shear strength of the solid wood test pieces and the adhesively bonded test pieces at ambient temperature and elevated temperature is compared in order to evaluate the shear strength of the adhesive at elevated temperature.

5 Apparatus

5.1 Test jig

The test equipment described in EN 14080:2013, Annex D is suitable for the performance of the shear test.

5.2 Climate chamber or oven

A climate chamber or oven capable of maintaining the targeted temperature to within ± 2 °C and with sufficient air circulation to provide constant temperature conditions within the oven interior for the heating of the test pieces.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-