



NSAI
Standards

Irish Standard
I.S. EN 15416-5:2017

Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 5: Determination of minimum pressing time under referenced conditions

I.S. EN 15416-5:2017

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 15416-5:2017

Published:

2017-01-25

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

2017-02-12

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 15416-5:2017 is the adopted Irish version of the European Document EN 15416-5:2017, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 5: Determination of minimum pressing time under referenced conditions

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

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 15416-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2017

ICS 83.180

Supersedes EN 15416-5:2006

English Version

Adhesives for load bearing timber structures other than
phenolic and aminoplastic - Test methods - Part 5:
Determination of minimum pressing time under
referenced conditions

Adhésifs pour structures portantes en bois de type
autre que phénolique et aminoplaste - Méthodes
d'essais - Partie 5 : Détermination du temps de
pressage minimal dans des conditions de référence

Klebstoffe für tragende Holzbauteile ausgenommen
Phenolharzklebstoffe und Aminoplaste - Prüfverfahren
- Teil 5: Bestimmung der Mindestpresszeit bei
Referenzbedingungen

This European Standard was approved by CEN on 30 October 2016.

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, 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents		Page
European foreword		3
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Principle	7
5	Apparatus	7
5.1	Climate cabinets	7
5.2	Testing machine	7
6	Procedure	7
6.1	General	7
6.2	Preparation of bonded assemblies	7
6.3	Preparation of test specimens	8
6.4	Test procedure	8
7	Expression of results	9
7.1	Tensile shear strength	9
7.2	Failure mode	9
8	Requirement	9
9	Test report	9
9.1	General information	9
9.2	Information about the adhesive	9
9.3	Preparation of test pieces and testing procedure	10
9.4	Test results	10

European foreword

This document (EN 15416-5:2017) 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 July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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 15416-5:2006.

Compared to EN 15416-5:2006, the following main modifications have been made:

- a) title has been changed;
- b) application for EPI adhesives according to EN 16254 has been added;
- c) the pressing times are determined for both close contact glue line and 0,3 mm thick glue line when testing PUR adhesives (EN 15425) and EPI adhesives in category “General purpose” (EN 16254), and close contact glue line and 0,2 mm thick glue for EPI adhesives designed for category “Small dimensions” (EN 16254);
- d) some parts of this European Standard are made in line with EN 302-6:2013;
- e) some of the wording in EN 302-1:2013 have been used to describe how to evaluate and report % wood failure (fibre failure) in the tested test pieces;
- f) it is stated that the glue application shall be done at the temperature used for conditioning and pressing of the material. When screening tests are performed, the material may, however, be removed from the test temperature for glue application;
- g) measurement and reporting of glue line thickness has been deleted.

This document is one of a series dealing with adhesives for use with timber structures, and is published in support of product standards for bonded load-bearing timber structures.

The series consists of three classification and performance requirements for adhesives for load-bearing timber structures, phenolic and aminoplastic adhesives (EN 301), one component polyurethane adhesives (EN 15425) and emulsion polymerized isocyanate adhesives (EN 16254), together with 12 test methods (EN 302 Parts 1 to 8 and EN 15416 Parts 1 and 3 to 5).

These European Standards have the following titles:

- EN 301, *Adhesives — phenolic and aminoplastic, for load-bearing timber structures — Classification and performance requirements*
- EN 15425, *Adhesives — One component polyurethane (PUR) for load-bearing timber structures - Classification and performance requirements*

EN 15416-5:2017 (E)

- EN 16254, *Adhesives — Emulsion polymerized isocyanate (EPI) for load-bearing timber structures — Classification and performance requirements*
- EN 302-1, *Adhesives for load-bearing timber structures — Test methods — Part 1: Determination of longitudinal tensile shear strength*
- EN 302-2, *Adhesives for load-bearing timber structures — Test methods — Part 2: Determination of resistance to delamination*
- EN 302-3, *Adhesives for load-bearing timber structures — Test methods — Part 3: Determination of the effect of acid damage to wood fibres by temperature and humidity cycling on the transverse tensile strength*
- EN 302-4, *Adhesives for load-bearing timber structures — Test methods — Part 4: Determination of the effects of wood shrinkage on the shear strength*
- EN 302-5, *Adhesives for load-bearing timber structures — Test methods — Part 5: Determination of maximum assembly time under referenced conditions*
- EN 302-6, *Adhesives for load-bearing timber structures — Test methods — Part 6: Determination of the minimum pressing time under referenced conditions*
- EN 302-7, *Adhesives for load-bearing timber structures — Test methods — Part 7: Determination of the working life under referenced conditions*
- EN 302-8, *Adhesives for load-bearing timber structures — Test methods — Part 8: Static load test of multiple bond line specimens in compression shear*
- EN 15416-1, *Adhesives for load bearing timber structures other than phenolic and aminoplastic — Test methods — Part 1: Long-term tension load test perpendicular to the bond line at varying climate conditions with specimens perpendicular to the glue line (Glass house test)*
- EN 15416-3, *Adhesives for load bearing timber structures other than phenolic and aminoplastic — Test methods — Part 3: Creep deformation test at cyclic climate conditions with specimens loaded in bending shear*
- EN 15416-4, *Adhesives for load bearing timber structures other than phenolic and aminoplastic — Test methods — Part 4: Determination of open assembly time under referenced conditions*
- EN 15416-5, *Adhesives for load bearing timber structures other than phenolic and aminoplastic — Test methods — Part 5: Determination of minimum pressing time under referenced conditions*

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.

Introduction

Safety statement

Persons using this European Standard should be familiar with the normal laboratory practice, if applicable. This European Standard 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 European Standard may have negative environmental impact. As technological advantages lead to better alternatives for these materials, they will be eliminated from this European Standard to the extent possible.

At the end of the test, it is recommended that the user of this European Standard take care to carry out an appropriate disposal of the wastes, according to local regulation.

EN 15416-5:2017 (E)

1 Scope

This European Standard specifies a laboratory method of determining the minimum pressing time for two glue line thicknesses, close contact and 0,2 mm or 0,3 mm, at three temperatures and three wood moisture contents.

This European Standard is intended to determine the minimum pressing time using a defined procedure for obtaining a reliable base for comparison of minimum pressing time between adhesives under referenced conditions.

The method gives a result that cannot be applied to the safe manufacture of timber structures without taking into account the influence in variation of factors such as timber density, moisture content, factory temperature and relative air humidity.

2 Normative references

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

EN 302-1:2013, *Adhesives for load-bearing timber structures — Test methods — Part 1: Determination of longitudinal tensile shear strength*

EN 923:2015, *Adhesives — Terms and definitions*

EN 15425, *Adhesives — One component polyurethane (PUR) for load-bearing timber structures — Classification and performance requirements*

EN 16254, *Adhesives — Emulsion polymerized isocyanate (EPI) for load-bearing timber structures — Classification and performance requirements*

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

ISO 6344-2, *Coated abrasives — Grain size analysis — Part 2: Determination of grain size distribution of macrogrits P12 to P220*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2015 and the following apply.

3.1 pressing time

time for which an adhesive joint is pressed

3.2 minimum pressing time

shortest pressing time until the minimum bonding strength has been reached

Note 1 to entry: The minimum bonding strength is specified in Clause 8 "Requirement".

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](#)
-