BS EN 14080:2013
*Incorporating corrigendum June 2014*

BSI Standards Publication

# Timber structures — Glued laminated timber and glued solid timber — Requirements

## National foreword

This British Standard is the UK implementation of EN 14080:2013. Together with BS EN 15497:2014 it supersedes BS EN 385:2001, which is withdrawn. It also supersedes BS EN 386:2001, BS EN 387:2001, BS EN 390:1995, BS EN 391:2002, BS EN 392:1995, BS EN 1194:1999 and BS EN 14080:2005 which are withdrawn.

BSI, as a member of CEN, is obliged to publish EN 14080 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval as a European Standard. The committee expressed the following concerns:

– General UK practice up until now has been to include a wider list of species, including hardwoods, from which glulam is to made, (as stated in the previously published standard BS EN 336), than is presented in EN 14080;

– The upper limits of thickness permitted for laminations that are used in the manufacture of softwood glued solid timber (GST) could lead to service issues arising from excessive distortion or splitting in certain environments, especially those in which there are fluctuations in moisture content.

An informative National Annex entitled 'Guidance on the implementation of BS EN 14080:2013 in the UK' has been included, which provides further information.

The UK participation in its preparation was entrusted to Technical Committee B/518, Structural timber.

A list of organizations represented on this committee can be obtained on request to its secretary.

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


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**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2014.

**Amendments/corrigenda issued since publication**

| Date | Text affected |
|---|---|
| 30 June 2014 | Supersession details corrected in national foreword |

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

**EN 14080**

June 2013

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English Version

# Timber structures - Glued laminated timber and glued solid timber - Requirements

Structures en bois - Bois lamellé collé et bois massif reconstitué - Exigences

Holzbauwerke - Brettschichtholz und Balkenschichtholz - Anforderungen

This European Standard was approved by CEN on 1 May 2013.

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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# Contents

Page

# Foreword

This document (EN 14080:2013) has been prepared by Technical Committee CEN/TC 124 “Timber structures”, the secretariat of which is held by AFNOR.

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 December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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

This document supersedes EN 391:2001, EN 392:1995, EN 14080:2005, EN 387:2001, EN 385:2001, EN 390:1994, EN 1194:1999 and EN 386:2001 (see below).

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This standard supersedes the following standards:

— EN 387:2001, *Glued laminated timber — Large finger joints — Performance requirements and minimum production requirements*;

— EN 390:1994, *Glued laminated timber — Sizes, permissible deviations*;

— EN 1194:1999, *Timber structures — Glued laminated timber — Strength classes and determination of characteristic values*;

— EN 14080:2005, *Timber structures — Glued laminated timber — Requirements*.

Regarding glued laminated timber this standard supersedes the following standards:

— EN 385:2001, *Finger jointed structural timber — Performance requirements and minimum production requirement* (superseded by the present document and prEN 15497);

— EN 386:2001, *Glued laminated timber — Performance requirements and minimum production requirements*;

NOTE For glulam made of hardwood species a European Standard is under preparation.

— EN 391:2001, *Glued laminated timber — Delamination test of glue lines*;

— EN 392:1995, *Glued laminated timber — Shear test of glue lines*.

The above standards have been merged into this standard and changed considerably. The list below shows the relevant changes and amendments.

The following have been included:

— Block glued glulam and glued solid timber;

— Requirements for emulsion polymer isocyanate adhesives and for gap-filling adhesives;

— A uniform denomination for lamination strength classes has been included. These T-classes are related to strength classes given in other European Standards;

— Rules for estimation mechanical properties of glued laminated timber resawn by length;

— Provisions for Resistance to fire;

— Maximum deviations for curved glued laminated products;

— New values for tensile and compression strength perpendicular to the grain, for shear strength and shear modulus, modulus of elasticity parallel and perpendicular to the grain for glued laminated timber with values for rolling shear strength and modulus.

The scope covers glued laminated products made from coniferous species listed in this standard and poplar.

For moisture curing one-component polyurethane adhesives normative reference is now made to EN 15416-5 and EN 15425.

For phenolic and aminoplastic adhesives reference is made to prEN 301 and prEN 302.

With respect to durability against biological attack reference is made to EN 15228.

The performance requirements for finger joints in laminations have been changed.

Requirements have been introduced for the machinery for the separate application of resin and hardener to finger joints in laminations.

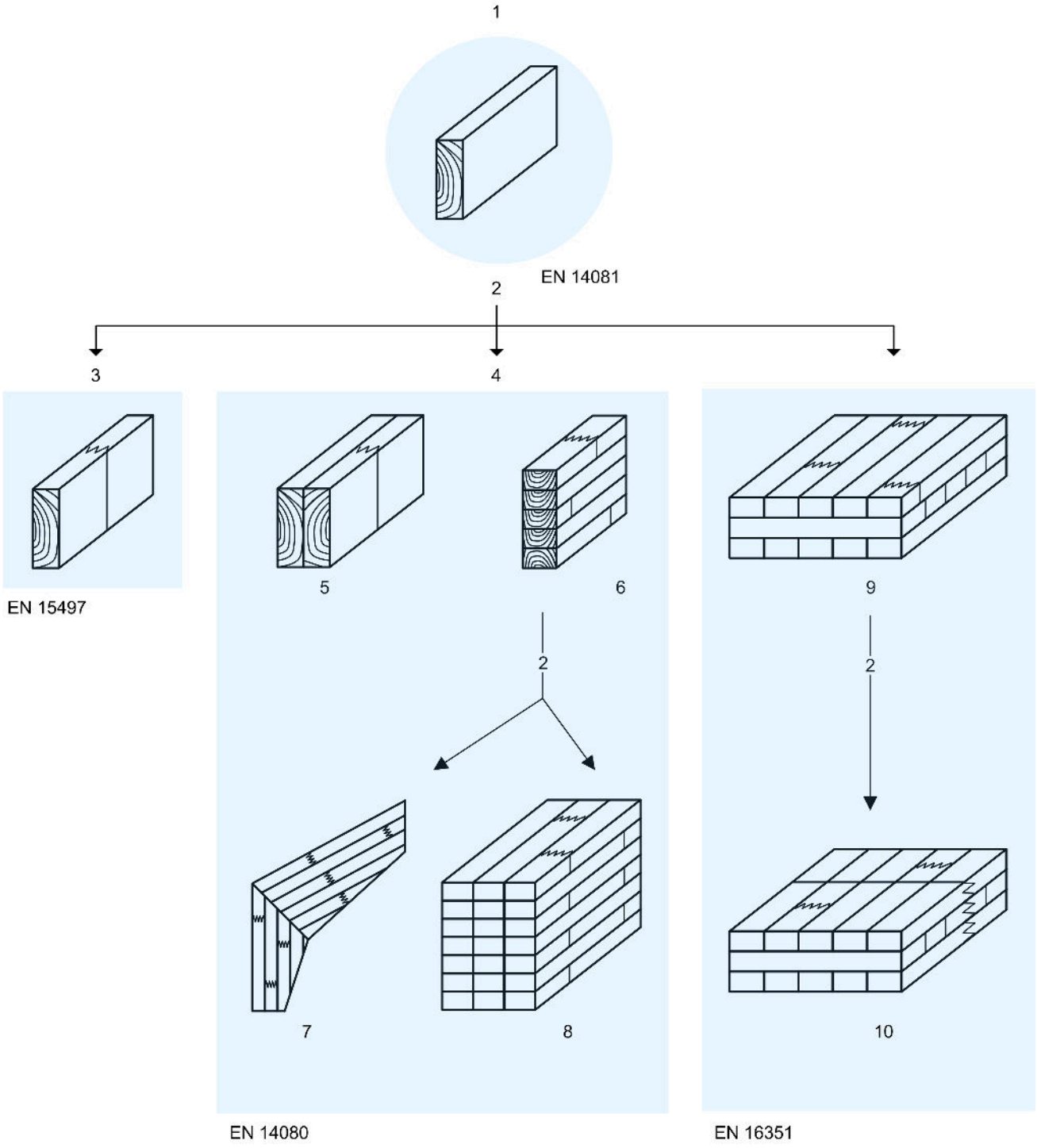
The rules for laminations laid side by side and for grooves in laminations have been changed.

The required cramping pressure for the production of large finger joints has been changed.

The evaluation of conformity section and the Annex ZA has been changed according to the revised answer to the mandate.

The rules for marking and labelling have been adopted to the changes mentioned above.

Figure 1 shows the relation of European Standards for structural timber products prepared by CEN/TC 124.




**Key**

| | | | |
|---|---|---|---|
| 1 | boards | 6 | glued laminated timber (glulam) |
| 2 | is a component for | 7 | glulam with large finger joints |
| 3 | structural finger jointed timber | 8 | block glued glulam |
| 4 | glued laminated products | 9 | cross laminated timber (X-Lam) |
| 5 | glued solid timber | 10 | cross laminated timber (X-Lam) with large finger joints |

**Figure 1 — Relation of European Standards for structural timber products prepared by CEN/TC 124**

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.