



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 1194:1999

ICS 79.060.99

91.080.20

**TIMBER STRUCTURES - GLUED LAMINATED
TIMBER - STRENGTH CLASSES AND
DETERMINATION OF CHARACTERISTIC
VALUES**

National Standards
Authority of Ireland
Dublin 9
Ireland

Tel. (01) 807 3800

Tel: (01) 807 3838

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland
and comes into effect on
July 9, 1999*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 1999

Price Code G

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1194

April 1999

ICS 79.060.99; 91.080.20

English version

Timber structures - Glued laminated timber - Strength classes and determination of characteristic values

Structure en bois - Bois lamellé-collé - Classes de
résistance et détermination des valeurs caractéristiques

Holzbauwerke - Brettschichtholz - Festigkeitsklassen und
Bestimmung charakteristischer Werte

This European Standard was approved by CEN on 1 June 1998.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 124 "Timber structures", the secretariat of which is held by DS.

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 october 1999 , and conflicting national standards shall be withdrawn at the latest by october 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This Standard is one of a series of standards for building materials. It was prepared by a working group under the joint convenorship of Association Française de Normalisation (AFNOR) and British Standards Institution (BSI).

This Standard includes a normative annex on calculation of characteristic properties and a normative annex on examples of combinations of laminations and marking of glued laminated timber.

Introduction

A strength class system enables combinations of grade and species to be classified together with a common set of strength properties. Such a system simplifies the process of marketing glued laminated timber by reducing the number of options at the specification/supply interface.

1 Scope

This standard specifies a system of strength classes for horizontally laminated structural glued laminated timber with four or more laminations. A number of strength classes are defined and characteristic strength and stiffness properties and densities are given. This standard is currently limited to softwood glued laminated timber.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 338	Structural timber - Strength classes
EN 384	Structural timber - Determination of characteristic values of mechanical properties and density
EN 385: 1995	Finger jointed structural timber - Performance requirements and minimum production requirements

EN 386	Glued laminated timber - Performance requirements and minimum production requirements
EN 408	Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties
EN 1193	Timber structures - Structural and glued laminated timber - Determination of shear strength and mechanical properties perpendicular to the grain
ENV 1995-1-1	Eurocode 5 - Design of timber structures - Part 1-1: General rules and rules for buildings

3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 glued laminated timber: Structural member formed by bonding together timber laminations with the grain running essentially parallel.

3.2 characteristic values: Refer to ENV 1995-1-1.

3.3 homogeneous glued laminated timber: Glued laminated timber with a cross-section where all laminations are of the same grade (strength class) and species (or species combinations).

3.4 combined glued laminated timber: Glued laminated timber with a cross-section comprising inner and outer laminations of different grades (strength classes) and species (or species combinations).

3.5 horizontally laminated glued laminated timber: See horizontal glulam defined in EN 386. For elements stressed in bending, the load is applied perpendicular to the wide faces of the laminations.

3.6 thickness: Lesser dimension perpendicular to the longitudinal axis.

3.7 width: Greater dimension perpendicular to the longitudinal axis.

3.8 depth: Dimension perpendicular to the longitudinal axis of a beam, in the plane of the bending forces.

4 Symbols

Main symbols:

- E_0 modulus of elasticity parallel to the grain, in newtons per square millimetre;
- f strength, in newtons per square millimetre;
- h depth of a bending specimen or width of a tension specimen, in millimetres;
- k factor;
- l length, in millimetres
- ρ density, in kilogrammes per cubic metre;

Subscripts:

- c compression;
- g properties of glued laminated timber;
- j properties of laminate end joints;
- k characteristic;
- l properties of laminations;
- m bending;
- mean mean value;
- size size factor;
- t tension;
- v shear;
- 0 parallel to grain;
- 90 perpendicular to grain;
- 05 5-percentile.

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](#)
-