

## **Puitkonstruktsioonid. Liimpuit. Tugevusklassid ja normväärtuste määramine**

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

## EESTI STANDARDI EESSÕNA

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**Võtmesõnad:** liimpuit, tugevus- ja jäikusomadused, tugevusklassid

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ICS 79.060.99; 91.080.20

**English version**

Timber structures

**Glued laminated timber**

Strength classes and determination of characteristic values

Structures 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 1998-06-01.

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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.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches 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of an identical text or by endorsement, at the latest by october 1999 , and conflicting national standards shall be withdrawn at the latest by october 1999.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.