EHITUSPUIT. TUGEVUSKLASSID

Structural timber - Strength classes

EESTI STANDARDI EESSÕNA   NATIONAL FOREWORD

See Eesti standard EVS-EN 338:2016 sisaldab Euroopa standardi EN 338:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 338:2016 consists of the English text of the European standard EN 338:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.04.2016.	Date of Availability of the European standard is 06.04.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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EN 338

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English Version

Structural timber - Strength classes

Bois de structure - Classes de résistance

Bauholz für tragende Zwecke - Festigkeitsklassen

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

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

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Content

European foreword

This document (EN 338:2016) 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of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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 338:2009.

Compared to EN 338:2009, the following modifications have been made:

— new table of strength classes for softwood species based on tension tests;

— extension with new classes in the table of strength classes for hardwood species based on edgewise bending tests;

— modification of some characteristic values for strength, stiffness and density;

— equations to determine the characteristic values of other strength properties from the grade determining properties has been transferred to EN 384.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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.

Introduction

A strength class system groups together grades, species and sources with similar strength properties thus making them interchangeable. This then permits an engineer to specify a chosen strength class and use the characteristic strength values of that class in design calculations.

1 Scope

This European Standard establishes a system of strength classes for general use in design codes.

It gives characteristic strength and stiffness properties and density values for each class to which EN 14081-1 refers.

This standard is applicable to all softwood and hardwood timber for structural use, within the scope of EN 14081-1.

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 384, *Structural timber — Determination of characteristic values of mechanical properties and density*

EN 14081 (all parts), *Timber structures — Strength graded structural timber with rectangular cross section*

3 Terms and definitions

For the purposes of this document, the following term and definition apply.

3.1
population
timber of one species or species combination and one source for which the strength, stiffness and density properties apply

4 Symbols and abbreviations

$E_{m,0,mean}$	mean characteristic value of modulus of elasticity in bending parallel to grain (in kN/mm^2);
$E_{t,0,mean}$	mean characteristic value of modulus of elasticity in tension parallel to grain (in kN/mm^2);
$E_{m,0,k}$	5-percentile characteristic value of modulus of elasticity in bending parallel to grain (in kN/mm^2);
$E_{t,0,k}$	5-percentile characteristic value of modulus of elasticity in tension parallel to grain (in kN/mm^2);
$E_{m,90,mean}$	mean characteristic value of modulus of elasticity in bending perpendicular to grain (in kN/mm^2);
$E_{t,90,mean}$	mean characteristic value of modulus of elasticity in tension perpendicular to grain (in kN/mm^2);
$f_{c,0,k}$	5-percentile characteristic value of compressive strength parallel to grain (in N/mm^2);
$f_{c,90,k}$	5-percentile characteristic value of compressive strength perpendicular to grain (in N/mm^2);
$f_{m,k}$	5-percentile characteristic value of bending strength (in N/mm^2);
$f_{t,0,k}$	5-percentile characteristic value of tensile strength parallel to grain (in N/mm^2);
$f_{t,90,k}$	5-percentile characteristic value of tensile strength perpendicular to grain (in N/mm^2);
$f_{v,k}$	5-percentile characteristic value of shear strength (in N/mm^2);