

**Traditsiooniliselt konstrueeritud eelkoostatud täispuidust trepid. Spetsifikaadid ja nõuded**

Traditionally designed prefabricated stairs made of solid wood - Specifications and requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15644:2009 sisaldab Euroopa standardi EN 15644:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.01.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 10.12.2008.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15644:2009 consists of the English text of the European standard EN 15644:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 29.01.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 10.12.2008.

The standard is available from Estonian standardisation organisation.

ICS 91.060.30

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ICS 91.060.30

English Version

## Traditionally designed prefabricated stairs made of solid wood - Specifications and requirements

Escaliers préfabriqués de conception traditionnelle en bois  
massif - Spécifications et exigences

Traditionell konstruierte, vorgefertigte Treppen aus  
Massivholz - Spezifikationen und Anforderungen

This European Standard was approved by CEN on 8 November 2008.

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## Foreword

This document (EN 15644:2008) has been prepared by Technical Committee CEN/TC 175 "Round and sawn timber", 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of an identical text or by endorsement, at the latest by June 2009, and conflicting national standards shall be withdrawn at the latest by June 2009.

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 standard is divided into parts:

- Clauses 4 and 5: General questions;
- Clauses 6 to 11: Applications to stairs made of solid wood.

If a general standard on stairs is developed and adopted, Clauses 4 and 5 of this document will be reconsidered to be aligned with the general standard, if needed.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard gives specifications and requirements for prefabricated stairs made of solid wood, i.e. where the components contributing to the fulfilment of mechanical resistance and stability characteristics are made of solid wood. These stairs are traditionally designed.

NOTE 1 If the filling of the guarding does not contribute to the mechanical stability and resistance, the used material is not relevant.

NOTE 2 Examples of traditionally made/designed stairs are given in Annex E.

This European Standard covers: stairs either pre-assembled, partly pre-assembled or in component form including balustrades and handrails for internal or external use.

This European Standard does not consider the contribution of these elements to the overall structure design. The ability of a stair to contribute to the overall stability of the works or to the strength of the structure is not covered by this standard.

Carpets on stairs are not covered by this Standard.

The surfaces of the wooden elements may be exposed or covered by finishes.

Where stairs are supplied with a finish or covering, aesthetic or visual characteristics will not be covered by this Standard and references shall be made to the appropriate product standard (e.g. colour fastness of carpet finishes).

## 2 Normative references

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

EN 335-2:2006, *Durability of wood and wood-based products — Definition of use classes — Part 2: Application to solid wood*

EN 350-1, *Durability of wood and wood-based products – Natural durability of solid wood – Part 1: Guide to the principles of testing and classification of the natural durability of wood*

EN 350-2, *Durability of wood and wood-based products – Natural durability of solid wood – Part 2: Guide to natural durability and treatability of selected wood species of importance in Europe*

EN 351-1, *Durability of wood and wood-based products — Preservative-treated solid wood — Part 1: Classification of preservative penetration and retention*

EN 599-1, *Durability of wood and wood-based products — Efficacy of preventive wood preservatives as determined by biological tests — Part 1: Specification according to use class*

EN 599-2, *Durability of wood and wood-based products — Performance of preventive wood preservatives as determined by biological tests — Part 2: Classification and labelling*

EN 1121, *Doors - Behaviour between two different climates - Test method*

EN 1294, *Door leaves - Determination of the behaviour under humidity variations in successive uniform climates*

EN 1365-6, *Fire resistance tests for loadbearing elements - Part 6: Stairs*

EN 1534, *Wood and parquet flooring – Determination of resistance to indentation (Brinell) – Test method*

EN 1990, *Eurocode – Basis of structural design*



- EN 1995-1-1, *Eurocode 5 - Design of timber structures – Part 1-1: General – Common rules and rules for buildings*
- ENV 1998-1-2:1994, *Eurocode 8 – Design provisions for earthquake resistance of structures – Part 1-2: General rules – General rules for buildings*
- EN 12219, *Doors – Climatic influences – Requirements and classification*
- EN 12600, *Glass in building – Pendulum test. Impact test - method and classification for flat glass*
- EN 13442, *Wood and parquet flooring and wood panelling and cladding – Determination of the resistance to chemical agents*
- EN 13501-1:2007, *Fire classification and construction products and building elements – Part 1: Classification using data from reaction to fire tests*
- EN 13647, *Wood and parquet flooring and wood panelling and cladding – Determination of geometrical characteristics*
- EN 13696, *Wood flooring – Test methods to determine elasticity and resistance to wear and impact resistance*
- EN 13986, *Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking*
- EN 14076:2004, *Timber stairs — Terminology*
- CEN/TS 15680, *Prefabricated timber stairs – Mechanical test methods*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14076:2004 and the following apply.

#### 3.1

##### **overlap**

horizontal distance (o) between the nosing of a tread that covers the rear edge of the immediate lower tread (see Figure 4)

#### 3.2

##### **calculation**

assessment of characteristics (for example mechanical resistance, stability, etc.) using formulae of appropriate design models for the structural behaviour of stairs and components including the use of tabulated values (for some characteristics, Eurocodes are relevant)

#### 3.3

##### **traditionally-designed prefabricated stair**

stair made of solid wood with steps with or without riser, housed on both ends into strings, either close string(s) and/or cut string(s)

NOTE Fixing of steps on both ends in/on strings indicates a design of steps as single-span beam (examples given in Annex E).

#### 3.4

##### **solid wood**

wood sawn or otherwise machined which may include finger jointed and/or laminated wood (as defined in EN 335-2)

NOTE A decorative veneer may be used if the hidden parts are made of solid wood.