
Solid hardwood panelling and cladding - Machined profiles elements

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ICS

English version

Solid hardwood panelling and cladding - Machined profiles elements

Lambris et bardages en bois massif feuillus - Eléments
profilés usinés

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (prEN 14951:2004) has been prepared by Technical Committee CEN/TC 175 “Round and sawn timber”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This standard is one of a series of standards concerning solid wood pannelling and wood flooring (including parquet).

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Introduction

This standard specifies the characteristics of solid hardwood panelling and cladding elements within. It is based upon current dimensional standards within the industry and other characteristics together with functions which have been verified by test.

A large amount of knowledge exists about solid wood panelling and cladding elements (hardwood) and values for product characteristics are attested by long use and experience. It is therefore not necessary to have test results. For new products technical data will have to be verified by testing.

The appearance of the wood panelling and cladding (hardwood) is mainly influenced by species, classification and the pattern (profiles - system of assembling).

1 Scope

This European standard defines the characteristics of solid hardwood panelling and cladding elements with or without grooves and/or tongues, for interior or exterior use.

It does not cover characteristics of the possible coating system.

NOTE 1 Product sold in The European Economic Area will have to comply with (WI 175099) under preparation.

NOTE 2 for softwood see NF EN 14519.

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 (including amendments).

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

EN 460, *Durability of wood and wood-based products - Natural durability of solid wood - Guide of the durability requirements for wood to be used in hazard classes*

EN 844-9, *Round and sawn timber – Terminology – Part 9 : Terms relating to features of sawn timber*

EN 975-1, *Sawn timber – Appearance grading of hardwoods – Part 1 : oak and beech*

EN 1309-1, *Round and sawn timber – Method of measurement of dimensions – Part 1: Sawn timber*

EN 1310, *Round and sawn timber - Method of measurement of features*

EN 1311, *Round and sawn timber - Method of measurement of biological degrade*

prEN 13183-1, *Round and sawn timber - Method of measurement of moisture content - Part 1: Method for determining moisture content of a piece of sawn timber (oven-dry method)*

prEN 13183-2, *Round and sawn timber - Method of measurement of moisture content - Part 2: Method for estimating moisture content of a piece of sawn timber (electrical resistance method)*

prEN 13307-2, *Timber blanks and semi-finished profiles for joinery – Production control*

prEN 13647, *Wood and wood panelling and cladding - Determination of geometrical characteristics*

prEN 13756, *Wood floor covering – Terminology*

prEN 14519, *Solid wood panelling and cladding – Softwood machined profiles with tongue and groove*

prEN 14762, *Wood flooring – Sampling procedures for evaluation of conformity*

3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in prEN 13756, EN 844-9 and EN 1309 and the following apply :

3.1

panelling and cladding without tongue and groove

boards of solid wood without “tongue and groove” which have been machined on the face and two edges. The back is either machined or hit and/or missed, depending on the product. The arrises may be chamfered or rounded. For special purposes (for instance, acoustic) the edges may have fastening grooves. The ends of the boards may be end-matched.

3.2

panelling and cladding with tongue and groove

tongued and grooved boards of solid wood which have been machined on the face and two edges and have been finished hit and/or missed on the back. The ends of the boards may be end-matched with tongue and groove

3.3

panelling

rigid or semi-rigid elements of solid wood mainly for interior use

3.4

cladding

rigid or semi-rigid elements of solid wood mainly for exterior use

4 Symbols and abbreviations

Symbols and abbreviations used in this European Standard are given in Figures 1 and 2 and in Tables 6 and 7.

5 Requirements

5.1 General

The hardwood species shall be selected with regard to the appearance expected, the suitability for the intended purpose and the general characteristics of the species itself. All requirements apply at the time of production, unless the manufacturer states otherwise. Finger jointing is acceptable.

NOTE the bonding corresponds to the internal or external use (see EN 13307).

5.2 Wood species

The most commonly used hardwood species for wood panelling and cladding elements are those mentioned in sub-clause 5.3.1 to 5.3.4 (European species) and 5.3.5 (Tropical species and other species). Other species can be used if indicated in contracts.

5.3 Appearance

5.3.1 General uses

Tables 1 to 5 define the classification relating to appearance rules for the face and for the non-visible parts (back and edges) of an element of the most commonly used hardwood species for solid wood panelling and cladding as defined in this standard.

Features shall be measured according to EN 1310 (knots assessed according to the general method of clause 4.1 in EN 1310). Biological alteration is measured according to EN 1311.

A classification with two appearance classes is specified, designated A and B.

A classification named "Free class" is based on the principles laid out in annex A.

The face shall include all the visible surface of the element. It shall therefore extend to the chamfering¹⁾, if any.

The wood shall be free from shake and shall be sound.

The boards may be finished with surface coating. The grading is done before the coating.

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1) the chamfering is visible when elements are assembled

5.3.2 Rules for the most commonly used species

5.3.2.1 Quercus spp. (oak)

Tableau 1 — Classification for Quercus spp. (oak)

Face of the element		
Features	Class	
	A	B
Sound sapwood	Not permitted	Not permitted
Knots Sound and intergrown Unsound knots	Permitted if : ≤ 1/5 of the width of the element diameter ≤ 1 mm	Permitted if : ≤ ½ of the width of the element diameter ≤ 10 mm
Checks	Permitted up to 15 mm in length	Permitted up to 50 mm in length
Lightning shake	Not permitted	Not permitted
Bark pockets	Not permitted	All features permitted without limit to size or quantity if these do not impair the use
Compression feature	Not permitted	
Slope of grain	Permitted, no limit	
Colour variation	Slight variation permitted	
Medullary ray	Permitted	Not permitted, except blue stain and black holes
Biological alteration (Fungal attack, insect damages)	Not permitted	
Non-visible parts		
All features permitted without limit to size or quantity if these do not impair the use.		
In the case of class A sound sapwood is permitted from the back up to the upper part of the tongue (for elements with tongue) and up to 3mm for elements without tongue and groove.		

5.3.2.2 *Fraxinus excelsior* (ash) and *Acer* spp. (maple)

Rules for ash and maple are given in Table 2.

Table 2 — Classification for *Fraxinus excelsior* (ash) and *Acer* spp. (maple)

Face of the element		
Features	Class	
	A	B
Sound sapwood	Not permitted	Not permitted
Knots Sound and intergrown Unsound knots	Permitted if : $\leq 1/5$ of the width of the element diameter ≤ 1 mm	Permitted if : $\leq 1/2$ of the width of the element diameter ≤ 10 mm
Checks	Permitted up to 15 mm in length	Permitted up to 50 mm in length
Lightning shake	Not permitted	Not permitted
Bark pockets	Not permitted	All features permitted without limit to size or quantity if these do not impair the use
Slope of grain	Permitted, no limit	
Colour variation	Slight variation permitted. Slight traces of natural discoloration and mineral lines permitted.	
Stick marks	Not permitted	
Biological alteration (Fungal attack, insect damages)	Not permitted	Not permitted, except blue stain and black holes
Non-visible parts		
All features permitted without limit to size or quantity if these do not impair the use		