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## Veneers — Terms and definitions, determination of physical characteristics and tolerances

*Placages — Termes et définitions, détermination des caractéristiques  
physiques et tolérances*

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Published in Switzerland

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 89, *Wood-based panels*, Subcommittee SC 3, *Plywood*.

This second edition cancels and replaces the first edition (ISO 18775:2008), which has been technically revised.

The main changes compared to the previous edition is as follows:

- an editorial change was done to precise a threshold value in [Table 1](#).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Veneers — Terms and definitions, determination of physical characteristics and tolerances

## 1 Scope

This document establishes the standard terms and definitions (including those relative to features and defects), the methods for the determination of physical characteristics and the tolerances for dimensions (length, width, thickness) for wood veneers, including natural, treated and multilaminar veneers, that can be obtained by slicing, rotary cutting or sawing. The specific definitions, properties and requirements concerning these treated, multilaminar veneers and laminated wood veneers are not included in this document.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 9427, *Wood-based panels — Determination of density*

ISO 16999, *Wood-based panels — Sampling and cutting of test pieces*

ISO 24294, *Timber — Round and sawn timber — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 24294 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1 General terms

#### 3.1.1

##### **backed veneer**

fleeced veneer

veneer which has been backed with special paper, fabric or other material

#### 3.1.2

##### **batch**

several veneers before a selection is made based on quality, structure, colour, dimensions, figure, etc.

#### 3.1.3

##### **bleached veneer**

veneer which has been subjected to a bleaching treatment

#### 3.1.4

##### **boule**

plot

veneers obtained from a single log by sequential slicing, laid together in sequence of cutting

**3.1.5**

**bundle**

number of *sliced veneers* (3.2.9) (e.g. 16, 24 or 32) stacked in the order from which they were sliced out of the trunk or log

**3.1.6**

**clipped veneer**

trimmed veneer

veneer with at least one edge cut straight and perpendicular to the surface of the veneer

**3.1.7**

**edge joint**

joint made in the general direction of the grain between two *clipped veneers* (3.1.6) placed edge to edge

**3.1.8**

**end joint**

joint made across the grain between two *clipped veneers* (3.1.6) laid end to end

**3.1.9**

**face**

veneer surface which will be visible after application

**3.1.10**

**flitch**

prismatic element, obtained by longitudinally cutting a log or trunk on the bandmill saw

Note 1 to entry: The plural “flitches” indicates the sequence of veneers cut from a log or part of a log.

**3.1.11**

**lay-on**

full size jointed and spliced veneer

**3.1.12**

**log run parcel**

trunk

whole series of veneers obtained from a single trunk, in the sequence of cutting

**3.1.13**

**loose side**

open side

slack side

<rotary cut veneers> side of the sheet that was in contact with the knife as the veneer was being cut, and containing cutting checks (lathe checks) due to the bending of the wood at the knife edge

**3.1.14**

**multilaminar veneer**

*sliced veneer* (3.2.9) obtained from a block or a board of *multilaminar wood* (3.1.15), to be used mainly for decorative purposes

**3.1.15**

**multilaminar wood**

material made up of wood veneers, placed one on top of the other, previously glued, pressed together so as to form a block or board

**3.1.16**

**tape**

strips of gummed paper or cloth placed on the veneer

**3.1.17****texture**

size and general arrangement of the cells and pores in the wood

EXAMPLE Fine, medium, coarse, irregular.

**3.1.18****through-dyed veneer**

veneer through dyed in any colour

Note 1 to entry: It has the same properties, as to workability and end use, as natural veneers.

**3.1.19****treated veneer**

veneer which has been treated to achieve particular physical, chemical or esthetical characteristics

EXAMPLE Ammonia-smoked oak.

**3.1.20****tight side**

<rotary cut veneers> side of the sheet that was farthest from the knife as the veneer was being cut, and containing no cutting checks (lathe checks)

**3.1.21****joint**

interface between two adjacent pieces of veneer

**3.1.22****jointed veneer**

veneer, the edge of which is trimmed in preparation for splicing

**3.1.23****spliced veneer**

veneer made of two or more *jointed veneers* (3.1.22) joined edge to edge

**3.1.24****stitched joint**

*spliced veneer* (3.1.23) employing glue “string” to maintain close contact at the interface

**3.1.25****veneer**

thin sheet of wood with a maximum thickness of 6 mm, rotary cut, sliced or sawn from a log, bolt or *flitch* (3.1.10)

Note 1 to entry: Veneers may be assembled together to achieve bigger dimensions.

**3.1.26****veneer length**

dimension of the *veneer* (3.1.25) measured in a direction parallel to the grain

Note 1 to entry: Veneer length shall be always the first dimension (Length×Width), even the length is smaller than the width.

**3.1.27****veneer minimum length**

smallest distance measured in a direction parallel to the grain

**3.1.28****veneer thickness**

dimension of the veneer perpendicular to the *face* (3.1.9)

### 3.1.29

#### **veneer width**

dimension of the veneer measured in a direction perpendicular to the grain and parallel to the face

## 3.2 Terms related to the production method

See [Figure A.1](#).

### 3.2.1

#### **eccentric quarter cutting**

quarter-round slicing

semi-rotary slicing

rift cutting

production method whereby veneers are obtained by fixing a quarter-log on the stay-log

Note 1 to entry: This results in veneers with a striped figure or in the form of a half-cathedral.

### 3.2.2

#### **flat quarter slicing, tangential**

Swedish quarter slicing

production method whereby veneers are obtained when the cut is made tangentially to the direction of the growth rings and perpendicularly to the rays, and cutting commences from the heart-side of the log

### 3.2.3

#### **flat slicing**

back cutting

plain slicing

flat cutting

production method whereby veneers are obtained when the cut is made tangentially to the direction of the growth rings and perpendicularly to the rays, and cutting commences from the sapwood side of the log

### 3.2.4

#### **half-round back cutting**

production method whereby veneers are obtained by fixing the log on the sapwood side on the stay-log

### 3.2.5

#### **quarter cathedral cutting**

production method whereby veneers are obtained by fixing a third- or quarter- log on the sapwood side on the stay-log

Note 1 to entry: Veneers are cut from the heart-side.

### 3.2.6

#### **rotary cut veneer**

peeled veneer

veneer continuously cut in a lathe which rotates a log or bolt, against a knife which is fixed over the whole length of the log and set at a slight angle

### 3.2.7

#### **sawn veneer**

veneer produced by sawing a log or a *flitch* ([3.1.10](#))

### 3.2.8

#### **semi-rotary cut veneer**

veneer cut purposely in a non-continuous ribbon in a lathe which rotates a log or bolt, chucked eccentrically, against a knife which is fixed over the whole length of the log and set at a slight angle



**3.2.9****sliced veneer**

veneer produced by thrusting a log or a *flitch* (3.1.10) into a slicing machine which slices off the veneers as sheets

**3.2.10****true half-round cutting**

production method whereby veneers are obtained by eccentric rotary cutting when the log is cut with a wider sweep than when it is mounted with its centre secured in the lathe

**3.2.11****true quarter slicing**

production method whereby veneers are obtained by quarter slicing a portion (1/4, 1/3) of a log, the cut being radial, perpendicular to the annual growth rings

**3.3 Terms related to visual effects and veneer matching****3.3.1****bird's eye**

figure showing many small circular or elliptical areas resembling a bird's eye, due to local sharp depressions in the annual rings (e.g. maple)

**3.3.2****blister grain**

figure in which the wood, while smooth, appears to be covered with blisters (depressed or elevated small roundish areas), due to uneven annual rings

Note 1 to entry: Such a figure is only obtained on flat-sawn or rotary cut surfaces.

**3.3.3****burr veneer**

burl veneer

veneer obtained from fairly rare woody outgrowths (clusters of dormant buds and knots) appearing on trees around grafts or injuries or, rarely, forming spontaneously in few wood species

**3.3.4****component**

individual piece of veneer that is jointed to other pieces to obtain a full length and full width sheet

**3.3.5****crotch figure**

curl

figure obtained by cutting through the junction of a branch and the main stem of a tree

**3.3.6****crown figure**

cathedral figure

flame pattern figure

appearance characterized by a series of stacked and inverted "V" and/or cathedral type of earlywood and latewood patterns common in plain-sliced (flat-cut) veneer

**3.3.7****double-faced effect**

apparent colour differences due to different light refraction in book matched veneers

Note 1 to entry: This occurs because in adjacent veneers the loose side and tight side faces alternate, thus reflecting the light differently.

### 3.3.8

#### **fiddle back figure**

irregular figure, caused by wavy and curly grain, with light coloured irregular stripes perpendicular to the direction of the grain, traditionally used to decorate the backs of violins

### 3.3.9

#### **finger roll figure**

wavy

wavy figure in which the waves are about the width of a finger (e.g. redwood, sequoia, etc.)

### 3.3.10

#### **gummed paper jointing**

jointing together two veneers edge to edge by means of a strip of gummed paper, prior to overlaying

Note 1 to entry: The paper will be removed before sanding the final product.

### 3.3.11

#### **half crown figure**

half flame

figure corresponding to half of a cathedral figure

### 3.3.12

#### **matching**

assembling veneers in a sequence according to their own sequential number, or in order to obtain specific dimensions and the pattern desired

Note 1 to entry: See [Figure B.1](#).

#### 3.3.12.1

##### **book matching**

*matching* ([3.3.12](#)) whereby alternating veneers from a *flitch* ([3.1.10](#)) or log are turned over so that adjacent veneers are “opened”, as two pages in a book

#### 3.3.12.2

##### **butt matching**

*matching* ([3.3.12](#)) whereby veneers are assembled as for *book matching* ([3.3.12.1](#)), but the ends of the veneers are also matched

Note 1 to entry: In this case, the veneers must also be flipped end to end and the ends matched.

#### 3.3.12.3

##### **centre matching**

*matching* ([3.3.12](#)) whereby an even number of veneers, not necessarily with the same width, is assembled symmetrically with respect to the central joint

#### 3.3.12.4

##### **diamond matching**

*matching* ([3.3.12](#)) whereby four veneers are cut diagonally and assembled to form a diamond

#### 3.3.12.5

##### **four-piece matching**

*matching* ([3.3.12](#)) whereby four veneers in cutting sequence are butt-matched forming a square

#### 3.3.12.6

##### **harlequin matching**

*matching* ([3.3.12](#)) whereby strips of veneers of different colours are assembled to achieve the desired dimensions