

Sawn timber used in pallets — Permitted deviations and guidelines for dimensions

The European Standard EN 12249:1999 has the status of a
British Standard

ICS 55.180.20

National foreword

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Sawn timber used in pallets — Permitted deviations and guidelines for dimensions

Bois sciés utilisés dans les palettes — Ecart
admissibles et guide pour les dimensions

Schmittholz in Paletten — Zulässige Abweichungen
und Leitfader für Maße

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European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Contents

	Page
Foreword	2
Introduction	3
1 Scope	3
2 Normative references	3
3 Definitions	3
4 Measurement	4
5 Changes in size due to changes in moisture content	4
6 Permitted deviations of cross-sections	4
7 Permitted deviations of lengths	5
Annex A (informative) Recommended standard dimensions and other traditional dimensions of sawn timber used in pallets	6
Annex B (informative) Bibliography	7

Foreword

This European Standard 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of an identical text or by endorsement, at the latest by December 1999, and conflicting national standards shall be withdrawn at the latest by December 1999.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.

Introduction

This standard specifies permitted deviations and recommends dimensions for sawn timber used in pallets.

A range of cross-sections and lengths, likely to be readily available, is given to assist both producers and users.

The recommended standard dimensions in Table A.1 are the basis for this standard. Further traditional dimensions are given in Table A.2.

All dimensions are given at a moisture content of 20 %. A method of calculating sizes at other moisture content levels is provided. The standard also stipulates the use of electric moisture meters for the measurement of moisture content.

This reference moisture content of 20 % does not prevent manufacturers from manufacturing pallets with dry or green timber.

1 Scope

This standard specifies two classes of permitted deviations (due to variability in sawing and processing) from target thicknesses, widths and lengths for timber used in pallets when measured at a defined reference moisture content¹⁾.

It also recommends dimensions of sawn timber used in pallets.

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 336, *Structural timber — Coniferous and poplar — Sizes, permissible deviations.*

EN 844-4:1997, *Round and sawn timber — Terminology — Part 4: Terms relating to moisture content.*

EN 844-6:1997, *Round and sawn timber — Terminology — Part 6: Terms relating to dimensions of sawn timber.*

EN 1313-1, *Round and sawn timber — Permitted deviations and preferred sizes — Part 1: Softwood sawn timber.*

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 method).*

3 Definitions

For the purposes of this standard, the following definitions apply.

3.1

actual size

size of a piece of sawn timber at the time of measurement

[EN 844-6:1997]

¹⁾As for the time being there is no standard foreseen for the supplying product, some elements are given in annex A.

3.2

moisture content

mass of moisture in wood expressed as a percentage of its oven-dry mass
[EN 844-4:1997]

3.3

moisture content size deviation

difference between an actual size and the corresponding basic size, making allowance for the difference in size due to difference in moisture content according to this standard

3.4

permitted dimensional deviations

the permissible variation of the actual size (length, width and/or thickness) from the referenced basic size resulting from sawing or processing

3.5

target size, basic size

for the purposes of this standard, basic size and target size are the same

3.5.1

target size

size desired after a particular production process (at a specified moisture content) to which the permitted deviations are related
[EN 844-6:1997]

3.5.2

basic size

size by which sawn timber is known or specified at a stated moisture content
[EN 844-6:1997]

4 Measurement

The measurement of the moisture content of individual elements shall be carried out according to prEN 13183-1 or prEN 13183-2.

The reference moisture content for measurements is 20 % according to EN 336.

5 Changes in size due to changes in moisture content

Unless there is evidence to the contrary, it shall be assumed that the thickness and width of a piece of timber increase by 0,25 % for every 1 % of moisture content from 20 % up to 30 %, and decrease by 0,25 % for every 1 % of moisture content below 20 %. The above values are typical, regardless of the species.

6 Permitted deviations of cross-sections

In any cross-section of each piece, the actual thickness and actual width of square-edged pieces may deviate from the target sizes (corrected to the reference moisture content of 20 % for changes due to changes in moisture content) by no more than as indicated in Table 1.

Table 1 — Cross-sections and their permitted deviations

	Dimensions in millimetres	
Cross-section	Class A	Class B
Thickness and/or width ≤ 100	+1 -1	+3 -1
Thickness and/or width > 100	+1,5 -1,5	+4 -2
Particular case: Blocks (all dimensions) Bearers (cross-section)	+1,5 -1,5	+3 -2

NOTE More restrictive permitted deviations can be specified in contracts if necessary.

7 Permitted deviations of lengths

Permitted deviations of lengths are given in Table 2.

Deviation standardized by finished product standards²⁾.

Table 2 — Permitted deviations of lengths

	Dimensions in millimetres	
Dimension	Class A	Class B
Component length	+0 -2	+1 -3

NOTE More restrictive permitted deviations can be specified in contracts if necessary.

²⁾ See ISO 6780.

Annex A (informative)
Recommended standard dimensions and other traditional dimensions of sawn timber used in pallets

Recommended standard dimensions are given in Table A.1.

Table A.1 — Recommended standard dimensions

Dimensions in millimetres

Thicknesses	Widths					
	75	100	125	150	175	200
16	x	X				
19	x	X	x			
22	x	X	x	X		
25						
32						
38						
50						
63						
75	X	X		X		
100		X				

where

X the large “**X**” denotes recommended standard dimensions.

NOTE Other dimensions can also be used in national rules.

Other traditional dimensions of sawn timber used in pallets are given in Table A.2.

Table A.2 — Other traditional dimensions of sawn timber used in pallets

Dimensions in millimetres

Thicknesses	Widths					
	80	100	120	145	175	200
15	x	X				
18	x	X	x			
22	x		x	X		
25						
32						
38						
50						
63						
75						
78		X		X		
80	X	X		X		
100						

where

X the large “**X**” indicates the most preferred cross-sectional dimensions;
x the small “x” indicates other frequently used cross-sectional dimensions.

Preferred lengths: 600, 800, 1000, 1 200 etc. according to the modular size system³⁾ or to other usual pallet dimensions.

NOTE 1 145 mm is also used for blocks and boards.

NOTE 2 Other dimensions can also be used in national rules.

Annex B (informative)

Bibliography

ISO 6780, *General-purpose flat pallets for through transit of goods — Principal dimensions and tolerances*.

³⁾ See ISO 6780.

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