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Wood raw parquet elements — General characteristics

Éléments de parquet bruts en bois — Caractéristiques générales

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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).

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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.

This document was prepared by Technical Committee ISO/TC 218, *Timber*.

This first edition of ISO 4556 cancels and replaces ISO 3397:1977 and ISO 5321:1978 as being the merging of the two International Standards.

The main changes are as follows:

— updating of the vocabulary according to ISO 5323:2019;

— clarifying on an editorial point of view some requirements.

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.

Introduction

The main purpose of this document is to establish the common international point of member countries of the International Organization for Standardization (ISO), concerning the manufacturing characteristics, the dimensions, the tolerances, the methods for quality control and delivery conditions, the measurement and the marking of hardwood and softwood raw parquet elements.

Wood raw parquet elements — General characteristics

1 Scope

This document specifies the manufacturing characteristics, the dimensions, the tolerances, the methods for quality control and delivery conditions, the measurement and the marking of hardwood and softwood raw parquet elements.

NOTE The classification of raw parquet elements according to specific characteristics and wood defects are specified, for the different species of wood, in the relevant International Standards such as ISO 4561.

This document applies to raw parquet elements intended for the manufacture of strips for different types of parquet flooring.

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 2036, *Wood for manufacture of wood flooring — Symbols for marking according to species*

ISO 5323, *Wood flooring and parquet — Vocabulary*

ISO 13061-1, *Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 1: Determination of moisture content for physical and mechanical tests*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5323 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
raw parquet element
raw parquet block (US, CANADA)
unfinished piece of solid wood having flat and reasonably parallel faces and rectangular cross-section, obtained by sawing, and having the dimensions required for the manufacture of parquet strips

[SOURCE: ISO 5323:2919, 3.4]

4 Geometrical characteristics

Raw parquet elements shall have the faces and the edges flat and parallel two by two. Faces and edges shall form parallel sharp arrises.

The arrises of the ends shall be perpendicular to the lateral arrises of the parquet element faces

5 Requirements

5.1 Dimensions

Tolerances for the production of hardwood raw parquet elements and softwood raw parquet elements are given respectively in Table 1 and Table 2

NOTE Dimensions for solid wood flooring boards according to ISO 17959 are different than those in the present standard.

Table 1 — Tolerances for softwood raw parquet elements

Dimensions in millimetres

	Dimensions		Safety oversize[b]
	Nominal[a]	Tolerances	
Thickness	25 (24)	+2 0	—
Width	40 to 140 varying by steps of 10	+2 0	2
Length	250 to 850 varying by steps of 50 900 to 1 400 varying by steps of 100 1 500 and more varying by steps of 300 (250)	+10 0	20

[a] Nominal dimension at 20 % of moisture content. For higher moisture contents, these dimensions shall be increased.

[b] In addition to the increments resulting from excess of moisture.

NOTE In North America the steps are different due to measures in inches not in millimetres and are subject of agreement among the interested parties.

Table 2 — Tolerances for hardwood raw parquet elements

Dimensions in millimetres

	Dimensions		Minimum dimension at 15 % moisture content[b]	Minimum sawing dimension in green condition[c]
	Nominal	Tolerances[a]		
Thickness	19 22 25 26	+2 0	19 22 25 26	21 24 27 28
Width	40 to 120 varying by steps of 10	+2 0	42 to 122 Varying by steps of 10	45 to 75 For width from 40 to 70 87 to 127 For width from 80 to 120

[a] Exclusive of the tolerances on flatness and parallelism that are defined by separate International Standards on the classification of parquet elements.

[b] These minimum dimensions have a safety oversize of 2 mm for the width and of 20 mm for the length in relation to the nominal dimensions, beside the increments due to the excess of moisture.

[c] It will be necessary to adapt these dimensions depending upon the sawing direction and the shrinkage coefficient of the specie

NOTE In North America the steps are different due to measures in inches not in millimetres and are subject of agreement among the interested parties.

Table 2 *(continued)*

	Dimensions		Minimum dimension at 15 % moisture content[b]	Minimum sawing dimension in green condition[c]
	Nominal	Tolerances[a]		
Length	150 to 850 Varying by steps of 50 900 and more Varying by steps of 100	 +10 0 	170 to 870 Varying by steps of 50 920 and more Varying by steps of 100	

[a] Exclusive of the tolerances on flatness and parallelism that are defined by separate International Standards on the classification of parquet elements.

[b] These minimum dimensions have a safety oversize of 2 mm for the width and of 20 mm for the length in relation to the nominal dimensions, beside the increments due to the excess of moisture.

[c] It will be necessary to adapt these dimensions depending upon the sawing direction and the shrinkage coefficient of the specie

NOTE In North America the steps are different due to measures in inches not in millimetres and are subject of agreement among the interested parties.

5.2 Squareness of ends

A slope not greater than 2 % shall be allowed for the squareness of ends.

5.3 Moisture

Unless otherwise agreed upon between the interested parties, the moisture content of raw parquet elements at delivery shall be not more than 20 % on dry mass for hardwood species and not more than 23 % on dry mass for softwood species.

6 Sampling

The inspection of the characteristics of raw parquet elements shall be carried out in compliance with the requirements indicated below, on pieces of which the representative sample is composed, taken from the batch.

Unless otherwise agreed upon between the interested parties, a batch of raw parquet elements is an assembly of raw parquet elements of the same wood species, nominal thickness and grade, presented in a single delivery for inspection.

A sample shall be taken from each batch.

The sample consists of a number of raw parquet elements, taken at random from the batch. The number of raw parquet elements in a sample shall be at least that specified in Table 3.

Table 3 — Number of elements in sample

Number of pieces in the batch	Number of pieces in the sample	Permitted number of rejected pieces in the sample
up to 300	35	2
from 301 to 500	50	3
from 501 to 800	75	4
from 801 to 1 300	110	6
from 1 301 to 3 200	150	8
from 3 201 to 8 000	225	11
from 8 001 to 22 000	300	14
from 22 001 to 110 000	450	20
from 110 001 to 550 000	750	31
over 550 000	1 500	56

When the number of rejected raw parquet elements does not exceed the number specified in Table 3, the batch is accepted. Otherwise, the batch shall be rejected, elements regrouped and the new batch presented for a new inspection.

7 Inspection method

All the raw parquet elements making up a sample shall be inspected individually.

The dimensions and the squareness of the ends to the lateral arrises of faces shall be checked with measuring instruments capable of recording to the prescribed degree of accuracy. The measurements shall be carried out at least at two points.

No dimension shall lie outside the tolerances specified in Clause 5.

The flatness shall be checked by the application of one of the raw parquet element faces on a perfectly flat surface and by measuring the deviations with appropriate measuring instruments.

The dimensions of defects shall be measured with appropriate measuring instruments.

Non-measurable defects and the appearance shall be visually examined.

The moisture content should be determined by means of an electrical device.

In the case of disagreement, the moisture content shall be determined by the gravimetric method specified in ISO 13061-1.

8 Designation

The raw parquet elements shall be designated by stating successively:

— the symbol of the wood species in accordance with ISO 2036;

— the dimensions (thickness × width × length) expressed in millimetres;

— the grade;

— the number of the International Standard referring to the respective species of wood.