
**Physical and mechanical properties of
wood — Test methods for small clear
wood specimens —**

Part 2:
**Determination of density for physical
and mechanical tests**

*Propriétés physiques et mécaniques du bois — Méthodes d'essais sur
échantillons de bois sans défauts —*

*Partie 2: Détermination de la masse volumique en vue des essais
physiques et mécaniques*



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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. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 218, *Timber*.

This first edition of ISO 13061-2 cancels and replaces ISO 3131:1975, which has been technically revised with regards to the sizes of test pieces, precision of measurements and adjustment for moisture content.

ISO 13061 consists of the following parts, under the general title *Physical and mechanical properties of wood — Test methods for small clear wood specimens*:

- Part 1: *Determination of moisture content for physical and mechanical tests*
- Part 2: *Determination of density for physical and mechanical tests*
- Part 3: *Determination of ultimate strength in static bending*
- Part 4: *Determination of modulus of elasticity in static bending*
- Part 6: *Determination of ultimate tensile stress parallel to grain*
- Part 7: *Determination of ultimate tensile stress perpendicular to grain*

The following parts are under preparation:

- Part 5: *Determination of strength in compression perpendicular to grain*
- Part 10: *Determination of impact bending strength*
- Part 11: *Determination of resistance to impact*
- Part 12: *Determination of static hardness*
- Part 13: *Determination of radial and tangential shrinkage*
- Part 14: *Determination of volumetric shrinkage*
- Part 15: *Determination of radial and tangential swelling*

- Part 16: *Determination of volumetric swelling*
- Part 17: *Determination of ultimate stress in compression parallel to grain*

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Introduction

The main purpose of ISO 13061 is to establish test methods for small clear wood specimens, and general requirements for determining physical and mechanical properties of wood.

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Physical and mechanical properties of wood — Test methods for small clear wood specimens —

Part 2:

Determination of density for physical and mechanical tests

1 Scope

This part of ISO 13061 specifies a method for determining the density of wood for physical and mechanical tests on small clear wood specimens. It may also be used to determine density of test specimens for other physical or mechanical test and/or to determine the relationship between density and other properties of wood.

2 Normative references

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

ISO 3129, *Wood — Sampling methods and general requirements for physical and mechanical testing of small clear wood specimens*

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

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.

3.1

wood density

mass of a unit volume of wood at specified moisture content

3.2

density in the absolutely dry condition (oven-dry density)

density based on oven-dry mass and oven-dry volume of a test piece

3.3

density at specified moisture content

density based on mass of a test piece including moisture and its volume at the same moisture content

3.4

basic (conventional) density

density based on oven-dry mass of a test piece and its green volume

3.5

green volume

volume of a test piece at moisture content greater than or equal to the fibre saturation point before any shrinkage occurs due to drying