International Standard

ISO 13061-13

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

Part 13: Determination of radial and tangential shrinkage

Propriétés physiques et mécaniques du bois — Méthodes d'essais sur petites éprouvettes de bois sans défauts —

Partie 13: Détermination des retraits radial et tangentiel

Second edition
2024-02

Reference number
ISO 13061-13:2024(en)

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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 document 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 of 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 www.iso.org/iso/foreword.html.

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

This second edition of cancels and replaces the first edition (ISO 13061-13:2016), which has been technically revised.

The main changes are as follows:

— changes in the sizes and measurements of test pieces.

A list of all parts in the ISO 13061 series can be found on the ISO website.

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.

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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 testing 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 13: Determination of radial and tangential shrinkage

1 Scope

This document specifies a method for the determination of linear shrinkage in the radial and tangential directions of wood.

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

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 apply.

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

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

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

4 Principle

The linear shrinkage is determined by measuring dimensions of a test piece in radial and tangential directions of wood before and after drying to a constant mass. The linear shrinkage is calculated as the change of the dimension in given direction expressed as a percentage of the original dimension. The initial measurements shall be taken on test pieces in green or fully saturated condition. The final measurements shall be taken on test pieces in oven-dry state.

5 Apparatus

5.1 Measuring instruments, capable of determining dimensions of the test piece to the nearest 0,02 mm, fitted with parallel flat ends each of diameter 5 mm to 8 mm, and applying a clamping force which will not cause any deformation greater than the precision of the instrument.

5.2 Forced convection oven that can be maintained at a temperature of (103 ± 2) °C throughout the drying chamber for the time required to dry the specimen to the end point shall be used. The oven shall be vented to allow the evaporated moisture to escape.

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