



SLOVENSKI STANDARD
SIST EN 13183-1:2003

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Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method

Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method

Feuchtegehalt eines Stückes Schnittholz - Teil 1: Bestimmung durch Darrverfahren

Teneur en humidité d'une pièce de bois scié - Partie 1: Détermination par la méthode par dessiccation

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Ta slovenski standard je istoveten z: EN 13183-1:2002

ICS:

79.040 Les, hlodovina in žagan les Wood, sawlogs and sawn timber

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en

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EUROPEAN STANDARD

EN 13183-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2002

ICS 79.040

English version

**Moisture content of a piece of sawn timber - Part 1:
Determination by oven dry method**Teneur en humidité d'une pièce de bois scié - Partie 1:
Détermination par la méthode par dessiccationFeuchtegehalt eines Stückes Schnittholz - Teil 1:
Bestimmung durch Darrverfahren

This European Standard was approved by CEN on 29 December 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**Management Centre: rue de Stassart, 36 B-1050 Brussels**

EN 13183-1:2002 (E)

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Foreword

This document EN 13183-1:2002 has been prepared by CEN/TC175 "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 October 2002, and conflicting national standards shall be withdrawn at the latest by October 2002.

This standard is one of a series, dealing with methods of measurement for round timber and sawn timber.

Other standards in this series are:

- | | | |
|------------|---|--|
| EN 13183-2 | : | Moisture content of a piece of sawn timber - Part 2: Estimation by electrical resistance method. |
| EN 1309-1 | : | Round and sawn timber - Method of measurement of dimensions - Part 1: Sawn timber. |
| EN 1310 | : | Round and sawn timber - Method of measurement of features. |
| EN 1311 | : | Round and sawn timber - Method of measurement of biological degrade. |

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This European Standard defines the method for determining the moisture content of a piece of sawn timber.

This method is considered as the reference method.

This standard applies to sawn timber, and timber which has been planed or mechanically surfaced by other means.

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 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 (including amendments).

EN 844-1, *Round and sawn timber - Terminology - Part 1: General terms common to round timber and sawn timber.*

EN 844-3, *Round and sawn timber - Terminology - Part 3: General terms relating to sawn timber.*

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

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

EN 844-7, *Round and sawn timber - Terminology - Part 7: Terms relating to anatomical structure of timber.*

EN 844-9, *Round and sawn timber - Terminology - Part 9: Terms relating to features of sawn timber.*

EN 844-12, *Round and sawn timber - Terminology - Part 12: Additional terms and general index.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions of EN 844-1, EN 844-3, EN 844-4, EN 844-6, EN 844-7, EN 844-9 and EN 844-12 apply.

4 Apparatus

Balance accurate to 0,1 g, if the mass of the test slice is likely to be more than 100 g in an oven dry state.

Balance accurate to 0,01 g, if the mass of the test slice is likely to be less than 100 g in an oven dry state.

Equipment for drying wood, ensuring free internal circulation of air and capable of maintaining a temperature of (103 ± 2) °C.

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5 Procedure

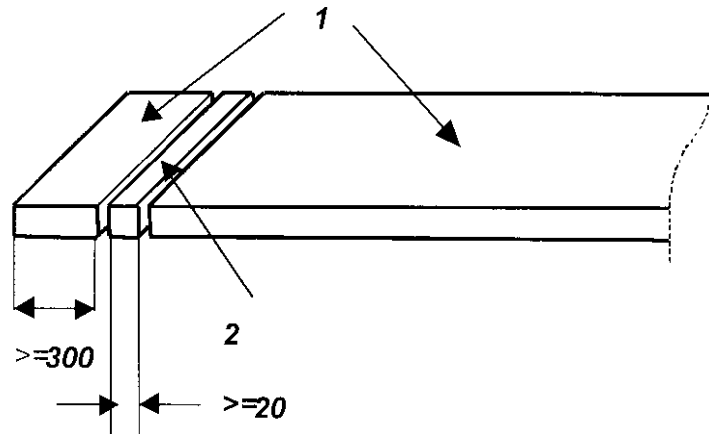
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Cut a test slice of full cross section and minimum 20 mm dimension in the direction of the grain, at a point by at 300 mm from either end of the test piece, or at the mid point if the piece is less than 600 mm long. The test slice shall be free from resin wood and features such as bark, knots and resin pockets. If such features exist, cut the test slice from the nearest clear area towards the centre of the test piece (see Figure 1).

Dimensions in millimetres

**Key**

- 1 Test piece
- 2 Test slice

Figure 1 - Position of the test slice

Weigh the test slice immediately after cutting.

Dry the weighed test slice at a temperature of $(103 \pm 2) ^\circ\text{C}$, until the difference in mass between two successive weighings separated by an interval of 2 hours is less than 0,1 %.

If it is not possible to weigh the test slice immediately after cutting, put the test slice in a sealed container to prevent moisture change and weigh within 2 hours.

Carry out the dry weight measurement immediately after the test slice has been taken out of the oven.

In order to obtain accurate results, timber which contains high amounts of volatile components (resin) should be dried under vacuum conditions (pressure $< 100 \text{ Pa}$), at low temperature (max. $50 ^\circ\text{C}$) or in a desiccator containing an hygroscopic substance.

6 Calculation and expression of the results

Calculate the moisture content, ω , as a percentage by mass, using the formula:

$$\omega = \frac{m_1 - m_0}{m_0} \times 100$$

where

- m_1 is the mass of the test slice before drying, in grams;
- m_0 is the mass of the oven dry test slice, in grams;
- ω is the moisture content, in percent.

Express the result to the nearest 0,1 percentage point moisture content.