



**NSAI**  
Standards

Irish Standard  
I.S. EN 1156:2013

# Wood-based panels - Determination of duration of load and creep factors

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## I.S. EN 1156:2013

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*This document replaces:*  
ENV 1156:1998

*This document is based on:*  
EN 1156:2013

*Published:*  
26 April, 2013

This document was published  
under the authority of the NSAI  
and comes into effect on:  
26 April, 2013

ICS number:  
79.060.01

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English Version

Wood-based panels - Determination of duration of load and  
creep factors

Panneaux à base de bois - Détermination des facteurs de  
durée de charge et de fluage

Holzwerkstoffe - Bestimmung von Zeitstandfestigkeit und  
Kriechzahl

This European Standard was approved by CEN on 1 March 2013.

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## **Foreword**

This document (EN 1156:2013) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes ENV 1156:1998.

Compared to ENV 1156:1998, the following significant technical modifications have been made:

- a) status changed from ENV to EN;
- b) accuracy of the deflection measurement changed from 0,001 mm to 0,01 mm.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies a method of determining in a constant climate both a duration of load factor and a creep factor for wood-based panels stressed in flatwise bending with and without a shear component. Details of an alternative but provisional method employing medium sized test pieces are given in Annex A; this method can also be used for test pieces loaded under varying climates.

**NOTE** The duration of load factor is necessary to modify the characteristic strength values obtained in short-term structural tests in order to derive long-term values. The creep factor obtained in the test is used to predict a long-term deflection from the initial elastic deflection.

## 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.

EN 310, *Wood-based panels — Determination of modulus of elasticity in bending and of bending strength*

EN 325, *Wood-based panels — Determination of dimensions of test pieces*

EN 326-1, *Wood-based panels — Sampling, cutting and inspection — Part 1: Sampling and cutting of test pieces and expression of test results*

EN 1058, *Wood-based panels — Determination of characteristic 5-percentile values and characteristic mean values*

EN 1995-1-1, *Eurocode 5: Design of timber structures — Part 1-1: General — Common rules and rules for buildings*

## 3 Principle

Determination in a constant climate of the load duration factor (loss in strength with time under load) and the creep factor (ratio of increase in deflection with time to the initial elastic deflection) in bending by applying and sustaining a constant moment over the central region of a test piece; both the time to failure, and the increase in deflection with time are measured.

## 4 Apparatus

**4.1 Measuring instruments** as specified in EN 325.

**4.2 A number of test rigs** (see Figure 1), that have essentially the following components:

**4.2.1 Two parallel cylindrical supports** of a length exceeding the width of the test piece and of diameter  $d = (15 \pm 0,5)$  mm.

The distance between the supports shall be adjustable, and each support shall be capable of rotating in its frame.

Two cylindrical loading rollers of the same length and diameter as the supports. These shall lie parallel to the supports, be capable of rotating, and be linked together with cross-arms of fixed length.

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