

Timber structures — Test methods — Performance of structural floor decking

The European Standard EN 1195 : 1997 has the status of a
British Standard

ICS 91.060.30; 91.080.20

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI
Documents



Document Sharing Hub

National foreword

This British Standard is the English language version of EN 1195 : 1997.

The UK participation in its preparation was entrusted by Technical Committee B/518, Structural timber, to Subcommittee B/518/1, Test methods, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled 'International Standards Correspondence Index', or by using the 'Find' facility of the BSI Standards Electronic Catalogue.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard, having been prepared under the direction of the Sector Board for Building and Civil Engineering, was published under the authority of the Standards Board and comes into effect on 15 February 1998

© BSI 1998

ISBN 0 580 28998 2

Amendments issued since publication

Amd. No.	Date	Text affected
9976	May 1998	Indicated by a sideline in the margin

ICS 91.060.30; 91.080.20

Descriptors: Timber construction, wooden floors, tests, impact tests, static tests, loadings, stiffness tests, comparative tests, test results

English version

Timber structures — Test methods — Performance of structural floor decking

Structures en bois — Méthodes d'essais —
Comportement des planchers structuraux

Holzbauwerke — Prüfverfahren — Tragverhalten
tragender Fußbodenbeläge

This European Standard was approved by CEN on 1997-10-02.

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 Central Secretariat 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 Central Secretariat 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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

© 1997 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 124, Timber structures, the Secretariat of which is held by DS.

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 April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.

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

Contents

	Page
Foreword	2
1 Scope	3
2 Normative references	3
3 Definitions	3
4 Symbols	3
5 Requirements	3
6 Test methods	3
6.1 Principle	3
6.2 Apparatus	3
6.3 Preparation of specimens	4
6.4 Procedure	4
6.5 Results	6
6.6 Test report	6
Annexes	
A (informative) Typical form of test floors	7
B (informative) Impact loading body	10

1 Scope

This standard specifies test methods for determining the performance of structural floor decking subjected to:

- specified concentrated static load (due e.g. to imposed action from persons, furniture and equipment); and
- specified impact loads (produced e.g. by human motion).

The decking considered is constructed of boards, laminated boards or wood-based panel products supported on timber joists.

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 any 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.

- EN 322 *Wood-based panels — Determination of moisture content*
- EN 323 *Wood-based panels — Determination of density*

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 set

Residual deformation of the test floor after the removal of the applied load.

3.2 differential set

Differing residual deformations at joints in the decking after the removal of the test load.

3.3 structural floor decking

Specified assembly of decking of boards or wood-based panel products. The characteristic of the decking is that it is supported by joists and, when subjected to load, free to deflect between the joists.

3.4 board

Floor decking material of sawn and processed solid timber.

3.5 panel

Floor decking material of wood-based panel products (e.g. particleboard or plywood).

3.6 method of support

The way in which the floor decking material is supported (e.g. simply or continuously supported), together with the form of fixing the floor decking material to the supports (e.g. nailing, screwing and/or gluing).

4 Symbols

F	applied load, in newtons;
$F_{\max}$	maximum load, in newtons;
$F_{\max, \text{est}}$	estimated maximum load, in newtons;
R	stiffness of the structural floor decking, in newtons per millimetre;
w	deformations, in millimetres;
w_m	mean value of the deformations in a test, in millimetres.

5 Requirements

The manufacture and assembly of the test floor decking shall comply with the manufacturer's specification.

NOTE. Typical types of test floor deckings are shown in annex A.

6 Test methods

6.1 Principle

The test floor decking shall be placed horizontally on a rigid base, the appropriate static or impact loads shall be applied and the corresponding deformations measured, and damage observed.

6.2 Apparatus

6.2.1 Static load test

The loading equipment used shall be capable of measuring the load to an accuracy of 2 % of the load applied or, for loads less than 10 % of the maximum load, with an accuracy of 0,2 % of the maximum load. The deformations shall be measured to within an accuracy of:

- 0,05 mm for values of up to 2,5 mm; and
- 0,1 mm for values greater than 2,5 mm.

The test apparatus, shown diagrammatically in annex A (which is used primarily to show a typical set up of the test floor decking) consists of the following:

- a) rigid base of structural steel (or equivalent) members positioned under, and providing continuous support to, the test floor joists. The test floor joists shall be fixed to the supports;
- b) device for applying a vertical concentrated static load. The load shall be applied through a flat steel surface with a diameter of $(25 \pm 0,1)$ mm and with the edge of the contact surface rounded with a radius of 2 mm;