

Implementation of
ISO 8611:1991

General-purpose flat pallets for through transit of goods — Test methods

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The preparation of this British Standard was entrusted to Technical Committee PKM/3, Package and unit load dimensions, upon which the following bodies were represented:

- British Apparel and Textile Confederation
- British Fibreboard Packaging Association
- British Glass Manufacturers' Confederation
- British Industrial Truck Association
- British Plastics Federation
- British Retail Consortium
- British Rubber Manufacturers' Association Ltd.
- British Soluble Coffee Manufacturers' Association
- British Timber Merchants' Association
- Chamber of Shipping
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- Engineering Equipment and Materials Users' Association
- Federation of the Electronics Industry
- Food and Drink Federation
- Health and Safety Executive
- Institute of Logistics
- Ministry of Defence
- National Materials Handling Centre
- Power Fastenings Association
- Pira International
- Road Haulage Association Ltd.
- Storage Equipment Manufacturers' Association
- Timber Packaging and Pallet Confederation

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National foreword

This British Standard reproduces verbatim ISO 8611:1991 incorporating Technical Corrigendum 1:1991 and implements it as the UK national standard. It supersedes DD 188:1990 which is withdrawn.

This British Standard is published under the direction of the Consumer Products and Services Sector Board whose Technical Committee PKM/3 has the responsibility to:

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

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO title page, page ii, pages 1 to 15 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

INTERNATIONAL STANDARD

ISO
8611

Second edition
1991-06-15

General-purpose flat pallets for through transit of goods — Test methods

*Palettes plates d'usage général pour le transport de marchandises —
Méthodes d'essai*



Reference number
ISO 8611:1991(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8611 was prepared by Technical Committee ISO/TC 51, *Pallets for unit load method of materials handling*.

This second edition cancels and replaces the first edition (ISO 8611:1988), and a wing pallet test (8.3) has been added.

Introduction

The tests specified in this International Standard are particularly appropriate for testing pallet prototypes. They may also be valuable in point-of-manufacture, quality assurance and field testing of pallets, but it is not intended that these tests be used for research purposes. Tests to establish data for pallet research will normally be considerably more comprehensive than those contained in this International Standard.

The majority of pallets are of conventional timber design. The tests specified in this International Standard are, to a large degree, applicable to such pallets. As new designs and materials, particularly plastics, are introduced, a pallet which meets the requirements for conventional timber designs may, however, be unfit for use in normal transit by virtue of undesirable properties. In such instances, the inclusion of special tests and special climatic conditioning prior to testing may have to be considered. Extension of the duration of the loading tests may also be desirable.

Suggested levels of performance in relation to the tests specified in this International Standard are given in ISO/TR 10233:1989, *General-purpose flat pallets for through transit of goods — Performance requirements*.

1 Scope

This International Standard specifies test methods for general-purpose flat pallets. The tests are principally intended for the evaluation of existing pallets or of new designs of pallet in relation to their designed load capacity.

NOTE 1 The tests may also be of value in

- a) testing individual pallet components;
- b) development of prototype pallets;
- c) research into basic performance (though these tests are not as comprehensive as most research requires: see note 7);
- d) evaluation of pallets from in-use failure situations;
- e) testing at point of manufacture (unconditioned).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 445:1984, *Pallets for materials handling — Vocabulary*.

ISO 2244:1985, *Packaging — Complete, filled transport packages — Horizontal impact tests (horizontal or inclined plane test; pendulum test)*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 445 apply.

4 Measurement and checking of test pallets

4.1 Pallets selected for testing shall be checked to ensure that materials, construction and dimensions conform with any stated specification (see clause 10).

4.2 The mass of each pallet shall also be determined and recorded, together with the moisture content of individual components at the time of weighing (where appropriate).

5 Number of replicates and sequence of testing

When evaluating a pallet in relation to its designed load capacity, a minimum of three replicates shall be tested. The complete sequence of tests shall be carried out consecutively in the exact order laid down in this International Standard. Wing pallets shall undergo all eight tests listed in clauses 8 and 9; other types of pallets shall undergo seven tests, i.e. excluding the test described in 8.3.

For each complete sequence of tests, the same pallet shall be used, including those tests where it is necessary to test the pallet across both of its horizontal axes.

6 Conditioning

6.1 Temperature and moisture are known to affect pallets of a number of materials both under test and in the field. Conditioning prior to testing takes account of the reaction of the pallet material to the test environment and ensures valid and repeatable test results.

A further purpose of conditioning is to predict the behaviour of identical pallets under the extreme conditions that may be encountered in transit while loaded with goods.

6.2 Table 1 includes details of conditioning environments relevant to pallet usage. They shall be applied as follows:

- a) the moisture content of timber pallets should not be less than 18 %. If the moisture content is below this value, the test may proceed provided that the moisture content of critical components is recorded every 24 h until completion of the test programme;
- b) at least one specimen of a plastics pallet shall be conditioned to environment A and a further pallet to environment B;
- c) at least one specimen of paper-based and wood-based pallets shall be conditioned to environment C or D.