Pallets for materials handling - Flat pallets - Part 2: Performance requirements and selection of tests (ISO 8611-2:2011)

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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 8611-2:2012 sisaldab Euroopa standardi EN ISO 8611-2:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 8611-2:2012 consists of the English text of the European standard EN ISO 8611-2:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.08.2012.	Date of Availability of the European standard is 08.08.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Pallets for materials handling - Flat pallets - Part 2: Performance requirements and selection of tests (ISO 8611-2:2011)

Palettes pour la manutention - Palettes plates - Partie 2: Exigences de performance et sélection des essais (ISO 8611-2:2011)

Paletten für den Gütertransport - Flachpaletten - Teil 2: Leistungsanforderungen und Auswahl von Prüfungen (ISO 8611-2:2011)

This European Standard was approved by CEN on 13 July 2012.

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Foreword

The text of ISO 8611-2:2011 has been prepared by Technical Committee ISO/TC 51 “Pallets for unit load methods of materials handling” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 8611-2:2012 by Technical Committee CEN/TC 261 “Packaging” 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of an identical text or by endorsement, at the latest by February 2013, and conflicting national standards shall be withdrawn at the latest by February 2013.

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Endorsement notice

The text of ISO 8611-2:2011 has been approved by CEN as a EN ISO 8611-2:2012 without any modification.

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Introduction

The forces to which pallets are exposed during use vary significantly. The test procedures described in ISO 8611-1 are approximate simulations of pallet use. These tests help the pallet designer to establish an initial acceptable balance between the cost and the performance of a pallet design. It is intended that all results of tests performed using this protocol be confirmed and verified using field trials before publication of performance or the commercial implementation of a new pallet design.

The nominal load, determined according to this test protocol, does not represent a payload and cannot be verified using field trials. The nominal load is a minimum payload level for use in determining maximum working load according to the procedures in ISO 8611-3. The maximum working load can be verified for a specified payload and intended use, using field trials. It is intended that the publication of the maximum working load include a description of the payload and the intended modes of use of the pallet.

It is essential to exercise care when comparing the results of tests with historic experience using existing pallet designs. User expectations of pallet performance vary. Some require greater and some accept lower levels of performance. Users are accepting different levels of risk when using pallets. Because of the varied performance expectations of pallet users, the results of tests might not always reflect the user's perception of pallet performance in use.

The nominal load might not reflect users' perception of pallet performance because the nominal load does not represent a payload. It is intended that maximum working loads be used to compare with the historic performance of existing pallet designs.

Regarding the use of the ISO 8611 series,

— ISO 8611-1 describes the test methods,

— this part of ISO 8611 describes the performance requirements and selection of tests, and

— ISO 8611-3 describes tests for determining maximum working loads for known payloads.

ISO 8611-1 and this part of ISO 8611 are required for determining nominal load. The nominal load is the lowest safe load value for the specified support conditions, independent of the type of load (excluding concentrated loads).

ISO 8611-1, this part of ISO 8611 and ISO 8611-3 are required for determining maximum working loads for known payloads.

The nominal load for the intended use is established by the selection of tests in ISO 8611-1 and the performance requirement is established from criteria in this part of ISO 8611.

The following three types of intended use with specified support conditions are defined:

— handling of loaded pallets with racking and stacking;

— handling of loaded pallets without racking;

— handling of loaded pallets without racking or stacking.

To determine the maximum working load through testing given in ISO 8611-3, the deflection under the known payload cannot exceed the limiting deflection (see 4.2, 4.3 and 4.4 of ISO 8611-3:2011) established in ISO 8611-1 and this part of ISO 8611. The maximum working load is the greatest payload that a pallet can be permitted to carry in a specific loading and support condition.

Guidance is given in Annex A of ISO 8611-3:2011 as to the general effect on performance of different load types and stabilization methods. These can only give guidance as to the likely result from tests with the known payload.

Other tests for durability evaluation are specified in ISO 8611-1.

Pallets for materials handling — Flat pallets —

Part 2: Performance requirements and selection of tests

1 Scope

This part of ISO 8611 specifies the performance requirements to establish nominal loads for new flat pallets.

It also specifies the tests required for new flat pallets in various handling environments and the performance requirements for tests with payloads. It is not intended to apply to pallets with a fixed superstructure or a rigid, self-supporting container that can be mechanically attached to the pallet and which contributes to the strength of the pallet.

2 Normative references

The following referenced documents are indispensable for the application 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 445, *Pallets for materials handling — Vocabulary*

ISO 8611-1, *Pallets for materials handling — Flat pallets — Part 1: Test methods*

ISO 8611-3, *Pallets for materials handling — Flat pallets — Part 3: Maximum working loads*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 445 and the following apply.

3.1
breaking of one component
fracture of a structural element which significantly affects the strength, stiffness or functionality of a pallet

3.2
concentrated load
load concentrated over an area of less than 50 % of the pallet top deck

[ISO 445:2008, definition 2.3]

3.3
maximum working load
greatest payload that a pallet is permitted to carry in a specific loading and support condition

NOTE 1 This varies according to the type, distribution, arrangement and means of stabilization of the load and the system of support, and can be lower or higher than the nominal load (see, for example, Clauses 4 and 6 and see also ISO 8611-3).

NOTE 2 Adapted from ISO 445:2008, definition 2.7.