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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4996-2025

Replacing GB/T 4996-2014

Flat pallets - Test methods

平托盘 试验方法

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 4996-2014 "Test methods for intermodal general flat pallets". Compared with GB/T 4996-2014, except for the structure in addition to adjustments and editorial changes, the main technical changes are as follows.

- Changed the applicable limits of the scope (see Chapter 1, Chapter 1 of the 2014 edition);
 - Changed "Flat Pallet", "Rated Load", "Ultimate Load", "Test Load", "Effective Load", "Maximum Working Load", and "Component Rupture" Definitions of the terms "rigidity", "stacking" and "racking" (see 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9, 3.11 and 3.12, 2014 edition) 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.7, 3.10 and 3.11);
 - Added the definition of "fork lift" (see 3.10);
 - Deleted the measurement requirements for wooden flat pallet testing (see 4.3 and 9.2 of the 2014 edition), and added the deflection recorded in the test and the requirements for the average value of maximum deflection (see 4.4);
 - Increased the requirements for the accuracy of test measuring instruments (see 5.1), increased the requirements for drop testers, and increased the requirements for inclined impact tests the requirements for machine structure and oblique movement distance (see 5.3) have been removed, and the deformation of the test bench should be taken into account when measuring the deflection of the pallet.
- Content (see 5.2 of the 2014 edition);
- Changed the requirements for each test load (see 6.1, 6.1 of the 2014 edition);
 - Changed the requirements for test selection and performance evaluation of flat pallets (see 7.1, 7.1 of the 2014 edition);
 - Changed the requirements for determining strength values in strength tests such as 1a, 2a, 3a, 4a, 5a, 6a and 7a (see 8.1.2.4, 8.2.2.2, 8.3.2.3, 8.4.2.3, 8.5.2.3, 8.6.2.2 and 8.7.2.8, 8.1.2.4, 8.2.2.2, 8.3.2.3, 8.4.2.3, 8.5.2.3, 8.6.2.2 and 8.7.2.8);
 - Changed the purpose of the fork lifting test (see 8.2.1, 8.2.1 of the 2014 edition), deleted the measurement of flat pallet decking deflection in the fork lifting test Requirements for curved angles (see Figure 2 of the 2014 edition);
 - Changed the purpose of the airbag bending test (see 8.7.1, 8.7.1 of the 2014 edition);
 - Added requirements for static shear test unloading time (see 8.8.2.2);

--- Changed the distance requirement between the impact point and the vertical end face of the impact block in the roof deck edge impact test (see 8.11.2.2, 2014 edition 8.11.2.1), added requirements for the load position in the top deck edge impact test and the pad impact test (see 8.11.2.3, 8.12.2.2);

--- Added the requirement to include information on impact distance, test load and number of impacts in the test report (see 9.1).

This document is modified to adopt ISO 8611-1:2025 "Material handling pallets - Flat pallets - Part 1: Test methods".

Compared with ISO 8611-1:2025, this document has many structural adjustments.

See Appendix A for the table.

The technical differences between this document and ISO 8611-1:2025 and their reasons are as follows.

--- Changed the applicable limits of the scope (see Chapter 1) to adapt to my country's technical conditions and increase operability;

--- The normative references GB/T 3716 replace ISO 445 (see Chapter 3), GB/T 4857.11 replace ISO 2244 (see 5.3) GB/T 4995-2025 replaces ISO 8611-2 (see 6.1, 8.1~8.7, 8.10~8.12) and adds normative references GB/T 18354 (see Chapter 3) and GB/T 4857.5 (see 5.3) have deleted the normative reference to ISO 12777-1 (see ISO 8611-1.

2025 9.2), EN13183-2 (see Chapter 4 of ISO 8611-1:2025), to adapt to my country's technical conditions and increase operability Acting nature.

--- Added the terms "flat pallet" and "fork lift" (see 3.1, 3.10) to facilitate understanding;

--- Deleted the term "concentrated load" (see 3.2 of ISO 8611-1:2025). This document does not use this term;

--- Increased the requirements for the accuracy of test measuring instruments (see 5.1), and deleted the requirement that the deformation of the test bench should be taken into account when measuring the deflection of the pallet etc. (see Chapter 5 of ISO 8611-1:2025), making the test method more rigorous and increasing operability;

--- Changed the airbag working pressure requirements in the airbag bending test (see 8.7.2.5) to increase operability.

The following editorial changes have been made to this document.

--- To coordinate with the existing standard, the name of the standard is changed to "Flat Pallet Test Method";

--- Deleted the note of 3.3;

--- Deleted the notes on the empirical values of test equipment deformation and test

accuracy in Chapter 5;

--- Deleted the attachment information of 6.2;

--- The content of the loading method in 8.4.1 is given in 8.4.2;

--- Changed the expression format of test points in 8.4.2.4 and 8.5.2.4;

--- Change the hazard reminder requirement of the inclined impact test in 8.10.2 to a note;

--- Change the hazard reminder requirement of the sliding angle test in 8.14.2.1 to a note;

---Added the note of 9.2;

--- The repeated letter labels in the full text figures are distinguished, and some sub-figure names are added;

--- Deleted the third-level headings of test measurements in each test, and incorporated the content into the test steps.

1 Scope

This document describes the test method for evaluating the performance of flat pallets, including test preparation, test equipment and instruments, test loads, test items, Tests and test reports.

This document applies to the design, production, inspection and use of flat pallets.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 3716 Pallet Terminology (GB/T 3716-2023, ISO 445:2013, IDT) GB/T 4857.5 Drop test method for packaging and transport packages GB/T 4857.11 Basic tests for packaging and transport packages Part 11: Horizontal impact test method (GB/T 4857.11-2005, ISO 2244:2000, MOD) GB/T 4995-2025 Flat pallets performance requirements and test selection (ISO 8611-2:2025, MOD) Note. There is no technical difference between the referenced content of GB/T 4995-2025 and the referenced content of ISO 8611-2:2025.

GB/T 18354 Logistics Terminology