



SLOVENSKI STANDARD
SIST EN ISO 12777-3:2003
01-julij-2003

DfYg_i gbY'a YlcXY'j Ynb\ 'YYa Ybrcj 'dUYH'È' "XY.'8c`c Yj Ub'Y'fXbcgh'j Ynb\ YYa Ybrcj 'dUYH'fIGC`%&+++!' Ł

Methods of test for pallet joints - Part 3: Determination of strength of pallet joints (ISO 12777-3:2002)

Prüfungen von Verbindungen an Paletten - Teil 3: Bestimmung der Festigkeit der Palettenverbindung (ISO 12777-3:2002)

Méthodes d'essai des assemblages de palettes - Partie 3: Détermination de la résistance des assemblages de palettes (ISO 12777-3:2002)

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Ta slovenski standard je istoveten z: EN ISO 12777-3:2002

ICS:

55.180.20 X^ } æ ^} • \ ^ Á æ ^ c^ General purpose pallets

SIST EN ISO 12777-3:2003 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 12777-3

December 2002

ICS 55.180.20

English version

Methods of test for pallet joints - Part 3: Determination of strength of pallet joints (ISO 12777-3:2002)

Méthodes d'essai des assemblages de palettes - Partie 3:
Détermination de la résistance des assemblages de
palettes (ISO 12777-3:2002)

Prüfungen von Verbindungen an Paletten - Teil 3:
Bestimmung der Festigkeit der Palettenverbindung (ISO
12777-3:2002)

This European Standard was approved by CEN on 15 November 2002.

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 Management Centre 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 Management Centre 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 12777-3:2002 (E)

CORRECTED 2003-02-05

Foreword

This document (EN ISO 12777-3:2002) has been prepared by Technical Committee ISO/TC 51 "Pallets for unit load method of materials handling" in collaboration with Technical Committee CEN/TC 261 "Packagings", 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 June 2003, and conflicting national standards shall be withdrawn at the latest by June 2003.

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

Endorsement notice

The text of ISO 12777-3:2002 has been approved by CEN as EN ISO 12777-3:2002 without any modifications.

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NOTE Normative references to International Standards are listed in Annex ZA (normative).

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Annex ZA (normative)

Normative references to international publications with their relevant European publications

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 (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 445	1996	Pallets for materials handling - Vocabulary	EN ISO 445	1998
ISO 1133	1997	Plastics - Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics	EN ISO 1133	1999
ISO 12777-1	1994	Methods of test for pallet joints - Part 1: Determination of bending resistance of pallet nails, other dowel-type fasteners and staples	EN ISO 12777-1	1996
ISO 12777-2	2000	Methods of test for pallet joints - Part 2: Determination of withdrawal and head pull-through resistance of pallet nails and staples	EN ISO 12777-2	2000

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INTERNATIONAL STANDARD

ISO 12777-3

First edition
2002-12-01

Methods of test for pallet joints — Part 3: Determination of strength of pallet joints

Méthodes d'essai des assemblages de palettes —

Partie 3: Détermination de la résistance des assemblages de palettes
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Reference number
ISO 12777-3:2002(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 12777 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12777-3 was prepared by Technical Committee ISO/TC 51, *Pallets for unit load method of materials handling*.

ISO 12777 consists of the following parts, under the general title *Methods of test for pallet joints*:

- Part 1: *Determination of bending resistance of pallet nails, other dowel-type fasteners and staples*
- Part 2: *Determination of withdrawal and head pull-through resistance of pallet nails and staples*
- Part 3: *Determination of strength of pallet joints*

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Introduction

This part of ISO 12777 was developed using methods that enable the user to select from a range of tests that best fits the particular problem or area of the pallet under analysis. Some are suitable for routine quality control and some are designed for laboratory use. Where characteristics of wood used in pallet joints are required then ISO 3133 and related standards as given in clause 2 may be used.

In general the tests if used as routine quality control tests only require the measurement of ultimate load, while if the tests are undertaken as prototype tests in a laboratory, then they also require measurement of deflection or distortion in the joint plotted during the application of the load.

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Methods of test for pallet joints —

Part 3:

Determination of strength of pallet joints

1 Scope

This part of ISO 12777 specifies methods of determining the resistance of pallet joints primarily to static load by determining the strength and stiffness of nailed or stapled joints, wood to wood, wood to wood-based materials, wood to plastics or plastics to plastics.

This part of ISO 12777 is applicable to joints with all types of nails up to 7 mm in diameter (including plain shank, helical, annular ring, barbed and twisted) and with staples.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 12777. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 12777 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 445:1996, *Pallets for materials handling — Vocabulary*

ISO 1133:1997, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*

ISO 1183:1987, *Plastics — Methods for determining the density and relative density of non-cellular plastics*

ISO 3130:1975, *Wood — Determination of moisture content for physical and mechanical tests*

ISO 3131:1975, *Wood — Determination of density for physical and mechanical tests*

ISO 3133:1975, *Wood — Determination of ultimate strength in static bending*

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

ISO/TR 11444:1995, *Quality of sawn wood used for the construction of pallets*

ISO 12777-1:1994, *Methods of test for pallet joints — Part 1: Determination of bending resistance of pallet nails, other dowel-type fasteners and staples*

ISO 12777-2:2000, *Methods of test for pallet joints — Part 2: Determination of withdrawal and head pull-through resistance of pallet nails and staples*

1) To be published.