



SLOVENSKI STANDARD

SIST EN ISO 22777:2005

01-april-2005

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Footwear - Test methods for accessories: touch and close fasteners - Peel strength before and after repeated closing (ISO 22777:2004)

Schuhe - Prüfverfahren für Zubehör: Haftverschlüsse - Abziehfestigkeit vor und nach wiederholtem Schließen (ISO 22777:2004)

Chaussures - Méthodes d'essai pour accessoires - fermetures auto-agrippantes - Résistance au pelage avant et après un usage répété (ISO 22777:2004)

Ta slovenski standard je istoveten z: EN ISO 22777:2004

ICS:

61.060 Obuvala Footwear

SIST EN ISO 22777:2005 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 22777

December 2004

ICS 61.060

English version

Footwear - Test methods for accessories: touch and close fasteners - Peel strength before and after repeated closing (ISO 22777:2004)

Chaussures - Méthodes d'essai pour accessoires :
fermetures auto-agrippantes - Résistance au pelage avant
et après un usage répété (ISO 22777:2004)

Schuhe - Prüfverfahren für Zubehör: Haftverschlüsse -
Abziehfestigkeit vor und nach wiederholtem Schließen (ISO
22777:2004)

This European Standard was approved by CEN on 23 August 2004.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN ISO 22777:2004) has been prepared by Technical Committee CEN/TC 309 "Footwear", the secretariat of which is held by AENOR, in collaboration with Technical Committee ISO/TC 216 "Footwear".

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 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN ISO 22777:2004 (E)

1 Scope

This document specifies a test method for determining the peel strength of touch and close fasteners before and after repeated use.

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.

EN 12222, *Footwear - Standard atmospheres for conditioning and testing of footwear and components for footwear*

EN 12240, *Touch and close fasteners — Determination of the overall and effective widths of tapes and the effective width of a closure*

EN ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system (ISO 7500-1:2004)*

3 Terms and definitions

STANDARD PREVIEW

For the purposes of this document, the following terms and definitions apply.

3.1 peel strength

force per unit effective width required to separate the two tapes forming the specified closure from an open edge under the specified conditions of test

3.2 effective width

width of the pile at 90° to the length of the tape and which does not include the selvedge

4 Principle

4.1 Peel strength

Both parts of a touch and close fastener are pressed together under controlled conditions, and the average force required to peel them apart along their length from either end is measured with a tensile testing machine. This procedure is then repeated with one of the parts of the fastener turned through 180°.

4.2 Peel strength after repeated opening and closing

A touch and close fastener is repeatedly opened and closed a standard number of times by a machine. The peel strength is then measured by repeating the test described in 4.1.

5 Apparatus

5.1 A tensile testing machine complying with the requirements of EN ISO 7500-1 to an accuracy corresponding to class 2, and with the following:

5.1.1 A jaw separation rate of $100 \text{ mm/min} \pm 10 \text{ mm/min}$.

5.1.2 The means of producing a continuous record of force throughout the test.

5.2 A roller device with a roller (see Figure 1) of diameter $100 \text{ mm} \pm 5 \text{ mm}$ capable of applying a force of $1,0 \text{ N} \pm 0,1 \text{ N}$ per millimetre width of the test specimen. This is to close the fastener under a standard pressure.

5.3 Fork with a handle (see Figure 2) which engages the roller (5.2) and allows it to be moved without any extra down force being applied (see Figure 3).

Dimensions in mm

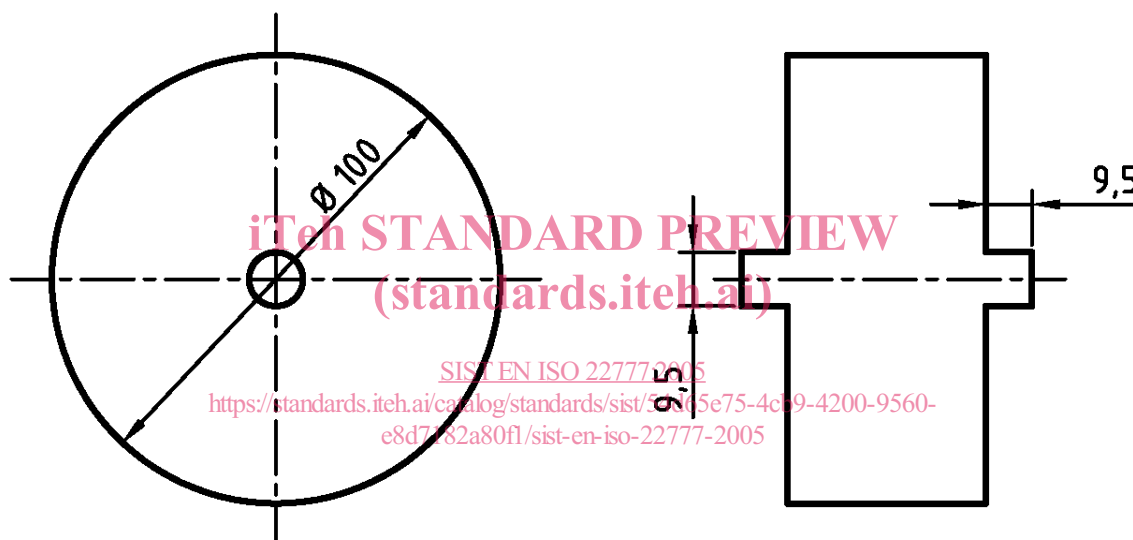
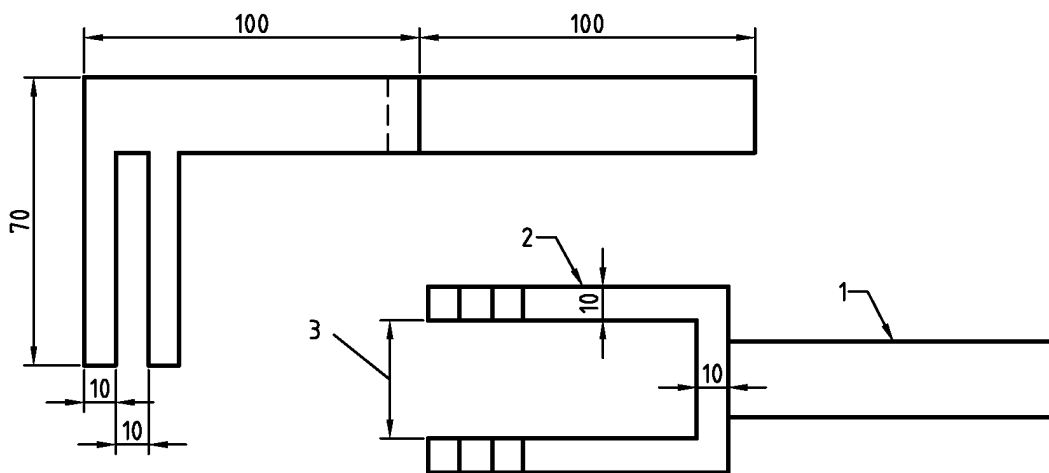


Figure 1 — Roller



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Key

- 1 Handle
- 2 Forks
- 3 Space between the forks to be 2 mm greater than the roller width

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Figure 2 — Fork with a handle

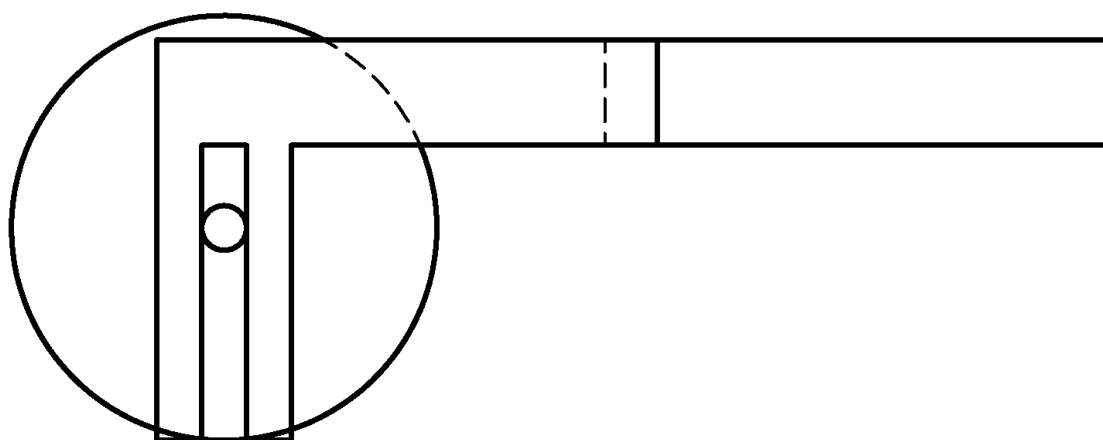


Figure 3 — Rolling mechanism for touch and close fasteners

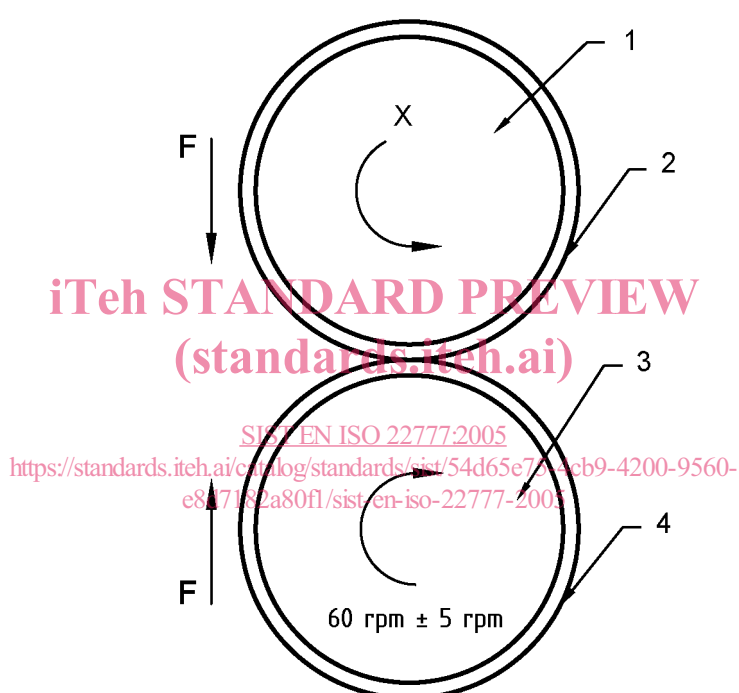
5.4 A touch and close cycling machine (see Figure 4) with:

5.4.1 Two circular drums of minimum width 70 mm, one of diameter 160,0 mm \pm 0,5 mm and the other diameter 162,5 mm \pm 0,5 mm. Each drum has a single slot of length 55 mm \pm 2 mm across its width to hold the free ends of the specimen fastener. The drums are mounted next to each other with their axes parallel.

5.4.2 A means of rotating the smaller of the two drums at a rate of 60 rev/min \pm 5 rev/min with the direction of rotation being reversed every 30 s \pm 5 s. The larger of the two drums rotates freely and is driven by physical contact with the smaller drum via the test specimen.

5.4.3 A means of applying a force of 1,0 N \pm 0,1 N between the two drums for every 1 mm width of the test specimen.

5.4.4 A method of counting the total number of rotations of the smaller of the two drums regardless of the direction of rotation.



Key

- 1 Idling drum (diameter 162,5 mm \pm 0,5 mm)
- 2 Hook tape
- 3 Driven drum (diameter 160 mm \pm 0,5 mm)
- 4 Loop tape
- F Force between drums = 1 N \times for every millimetre of effective width of fastener
- X Drum

Figure 4 — Touch and close fastener cycling machine

6 Test specimens

6.1 Peel strength

6.1.1 Cut one piece of minimum length 420 mm from both the hook and loop tapes.