
**Footwear — Test methods for
accessories: Touch and close
fasteners — Peel strength before and
after repeated closing**

*Chaussures — Méthodes d'essai pour accessoires: fermetures
auto-agrippantes — Résistance au pelage avant et après un usage
répété*

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22777 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 216, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read “...this European Standard...” to mean “...this International Standard...”.

Annex ZA provides a list of corresponding International and European Standards for which equivalents are not given in the text.

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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of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.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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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

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

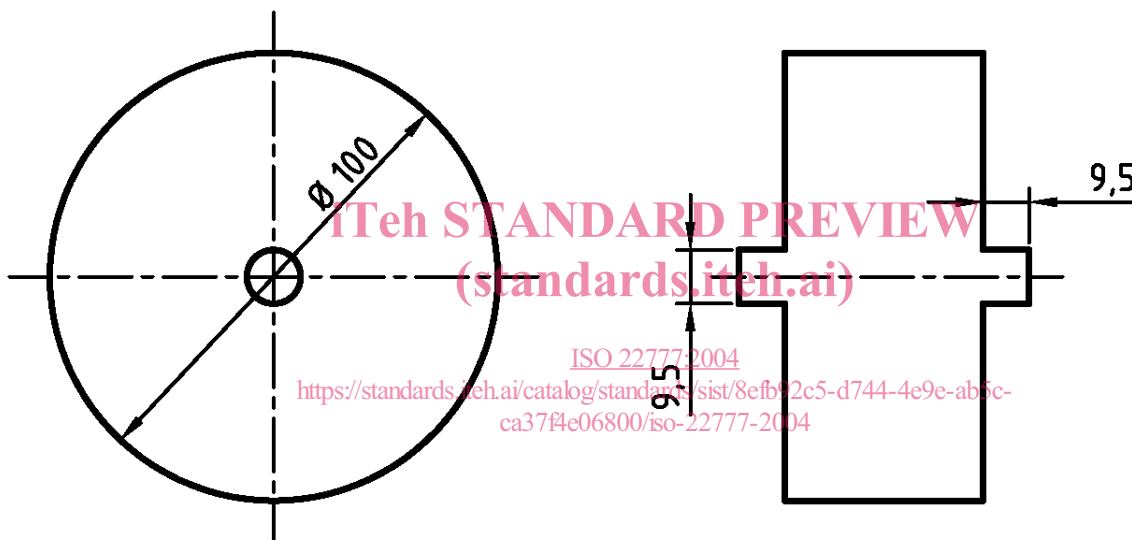
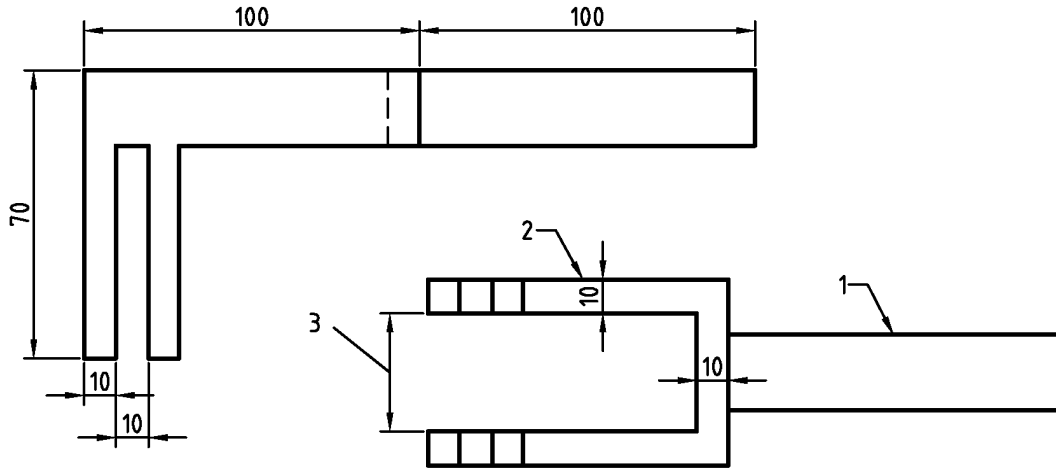


Figure 1 — Roller

Dimensions in mm



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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

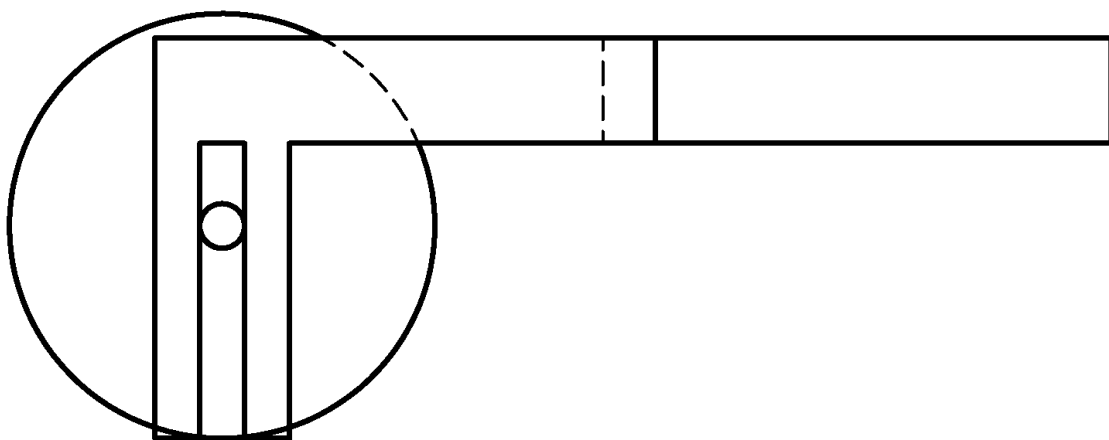


Figure 3 — Rolling mechanism for touch and close fasteners