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Footwear — Test methods for heels — Heel pin holding strength

Chaussures — Méthodes d'essai relatives aux talons — Résistance à l'arrachement de pointe à talon

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 216, *Footwear*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 19957:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO 19957:2004/Cor 1:2005.

The main changes compared to the previous edition are as follows:

— small correction in the formula of the calculation of heel pin holding strength, given in 7.1;

— the title of Clause 5 has been changed from “Sampling and conditioning” to “Sampling and preparation”;

— two figures have been added to illustrate how the sample is clamped between the two jaws of the tensile testing machine;

— some editorial changes and wording revision to clarify the text.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Footwear — Test methods for heels — Heel pin holding strength

1 Scope

This document specifies a test method for measuring the force required to pull a single heel pin out of a heel. This test method is used both to measure the heel pin holding strength of heel materials by using a standard heel pin and a method of insertion, and to assess the heel nailing of commercial production.

This test method is applicable to testing plastics and wooden heels for women's footwear. Heels composed of layers of fibreboard or leather and low plastics heels for men's footwear cannot be tested by this method.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
heel pin holding strength
force required to pull a standard pin out of the heel material divided by the effective length of pin buttressing in the material, expressed as N/mm

4 Apparatus and material

The following apparatus and material shall be used:

4.1 Tensile testing machine, in accordance with ISO 7500-1, class 2, with a range of approximately 0 N to 2 000 N and a constant rate of traverse of 40 mm/min ± 10 mm/min.

4.2 Small clamp or slotted hook, which can be attached to one jaw of the tensile testing machine via a flexible coupling.

4.3 Commercial heel nailing machine.

4.4 Standard heel pin (see Figure 1), with the following dimensions:

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