



# Technical Specification

**ISO/TS 23889**

## Footwear — Performance requirements for components for footwear — Heels and top pieces

*Chaussures — Exigences de performance pour les composants des  
chaussures — Talons et bonbouts*

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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.

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](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 216, *Footwear*.

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](http://www.iso.org/members.html).

# Footwear — Performance requirements for components for footwear — Heels and top pieces

## 1 Scope

This document establishes the performance requirements for heel and top pieces components for footwear, irrespective of the material, in order to assess the suitability for the end use and/or fitness for purpose. It also establishes the test methods used to evaluate the compliance with the requirements.

This document applies to heel and top piece for all kind of footwear as defined in [Clause 4](#). It does not apply to finished footwear.

This document can be used as a reference by the manufacturer and the supplier.

## 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 80000-1, *Quantities and units — Part 1: General*

ISO 20871, *Footwear — Test methods for outsoles — Abrasion resistance*

ISO 24267, *Footwear — Determination of coefficient of friction for footwear and sole components — Test method*

ISO 17709, *Footwear — Sampling location, preparation and duration of conditioning of samples and test pieces*

ISO 19952, *Footwear — Vocabulary*

ISO 19953, *Footwear — Test methods for heels — Resistance to lateral impact*

ISO 19956, *Footwear — Test methods for heels — Fatigue resistance*

ISO 19957, *Footwear — Test methods for heels — Heel pin holding strength*

ISO 24264, *Footwear — Test methods for hollow and compact heels with top pieces — Top piece attachment strength*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19952 apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Classification

The footwear shall be classified according to [Table 1](#).

Table 1 — Classification

Class	Exposure	Examples
A	slight	infant shoes, slippers, indoor shoes, fashion shoes
B	medium	casual shoes (adult and children shoes)
C	high	children school shoes, adult work shoes (not PPE) and general sport shoes
D	heavy	heavy work shoes (not PPE), trekking, hiking or similar purpose sports shoes

## 5 Requirements

### 5.1 General

This document establishes two different types of performance requirement.

The essential requirements shall all be fulfilled. Additional requirements can be agreed upon by the component supplier and the footwear manufacturer as indicated in 5.2 and 5.3.

The results of each analytical determination, as well as the average values, shall be rounded off in accordance with ISO 80000-1.

When taken from finished footwear, samples shall be prepared in accordance with ISO 17709.

The requirements in 5.2 and 5.3 are the same for all classes defined in Table 1.

### 5.2 Performance requirements for heels

#### 5.2.1 Essential requirements for heels

Table 2 shows the essential requirements for heels, which shall be fulfilled in all cases.

Table 2 — Essential test methods and requirements for heels

Test method	Property	Requirement
ISO 19953	Resistance to lateral impact <sup>a</sup>	≥ 5 J
ISO 19956	Fatigue resistance <sup>a</sup>	≥ 14 000 impacts
ISO 19957	Heel pin holding strength	≥ 80 N/mm

<sup>a</sup> Only applicable in heels higher than 5 cm.

#### 5.2.2 Additional requirements for heels

There are no additional requirements for heels.

### 5.3 Performance requirements for top pieces

#### 5.3.1 Essential requirements for top pieces

Table 3 shows the essential requirements for top pieces, which shall be fulfilled in all cases.