



Technical Specification

ISO/TS 20961

Footwear — Performance requirements for components for footwear — Shanks

*Chaussures — Exigences de performance pour les composants des
chaussures — Cambriens*

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Foreword

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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.

Footwear — Performance requirements for components for footwear — Shanks

1 Scope

This document establishes the performance requirements for shank 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 to be used to evaluate the compliance with the requirements.

This document applies to shanks for all kinds of footwear as defined in [Clause 4](#).

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

ISO 18895, *Footwear — Test methods for shanks — Fatigue resistance*

ISO 18896, *Footwear — Test methods for shanks — Longitudinal stiffness*

ISO 19952, *Footwear — Vocabulary*

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

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	Shoe type
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 essential performance requirements, all of which shall be fulfilled.

The results of each 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.

5.2 Performance requirements for shanks components

The requirements in [Table 2](#) shall apply to all classes defined in [Table 1](#).

Table 2 — Test methods and properties for all types of footwear

Test method	Property	Requirement	
ISO 18895	Fatigue resistance	Heel height, measured vertically at the back	
		< 50 mm	≥ 3 000 cycles
		50 mm to 74 mm	≥ 8 000 cycles
		75 mm to 99 mm	≥ 20 000 cycles
		≥ 100 mm	≥ 60 000 cycles
ISO 18896	Longitudinal stiffness	Heel height, measured vertically at the back	
		< 50 mm	≥ 400 kN · mm ²
		50 mm to 74 mm	≥ 800 kN · mm ²
		75 mm to 99 mm	≥ 1 200 kN · mm ²
		≥ 100 mm	≥ 1 600 kN · mm ²

6 Marking and labelling

Marking and labelling are optional.

If reference to this document is made, only shanks complying with all the requirements may be marked. In this case, this shall be clearly marked by the manufacturer either directly on the product or by a label with the following additional information:

- the manufacturer's name, trade mark or identification mark;
- heel height, in millimetres;
- reference to this document.

Any reference to compliance with this document shall not be put in a part of the insole which can be visible when the footwear is finished.