



Technical Specification

ISO/TS 20961

Footwear — Performance requirements for components for footwear — Shanks

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

**First edition
2024-11**

STANDARDSISO.COM : Click to view the full PDF of ISO/TS 20961:2024

STANDARDSISO.COM : Click to view the full PDF of ISO/TS 20961:2024



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	1
5 Requirements	2
5.1 General.....	2
5.2 Performance requirements for shanks components.....	2
6 Marking and labelling	2

STANDARDSISO.COM : Click to view the full PDF of ISO/TS 20961:2024

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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.

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 $\geq 3\,000$ cycles
		50 mm to 74 mm $\geq 8\,000$ cycles
		75 mm to 99 mm $\geq 20\,000$ cycles
		≥ 100 mm $\geq 60\,000$ cycles
ISO 18896	Longitudinal stiffness	Heel height, measured vertically at the back
		< 50 mm $\geq 400 \text{ kN} \cdot \text{mm}^2$
		50 mm to 74 mm $\geq 800 \text{ kN} \cdot \text{mm}^2$
		75 mm to 99 mm $\geq 1\,200 \text{ kN} \cdot \text{mm}^2$
		≥ 100 mm $\geq 1\,600 \text{ kN} \cdot \text{mm}^2$

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:

- a) the manufacturer's name, trade mark or identification mark;
- b) heel height, in millimetres;
- c) 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.