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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 33393-2023

Replacing GB/T 33393-2016

**Footwear-Test methods for whole shoe-Measurement of
thermal and water-vapour resistance**

鞋类 整鞋试验方法 热阻和湿阻的测定

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Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document replaces GB/T 33393-2016 "Test Methods for Whole Footwear - Determination of Thermal and Moisture Resistance under Steady State Conditions" and is consistent with Compared with GB/T 33393-2016, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Changes in terms and definitions (see Chapter 3, Chapter 3 of the:2016 edition);
- b) The principle has been changed (see 4:1, 5:1, Chapter 4 of the:2016 edition);
- c) Changes in instruments, equipment and materials (see 4:2, 5:2, Chapter 5 of the:2016 edition);
- d) The sample and environmental conditioning requirements have been changed (see 4:3, 5:3, Chapter 6 of the:2016 edition);
- e) The test procedures have been changed (see 4:4, 5:4, Chapter 7 of the:2016 edition);
- f) The test results have been changed (see 4:5, 5:5, Chapter 8 of the:2016 edition);
- g) The test report has been changed (see Chapter 6, Chapter 9 of the:2016 edition):

This document is proposed by China Light Industry Federation:

This document is under the jurisdiction of the National Shoemaking Standardization Technical Committee (SAC/TC305):

This document was drafted by: Sichuan Leather Research Institute, Guangzhou Inspection, Testing and Certification Group Co., Ltd., Lirong Shoes (Shenzhen) Co., Ltd., Wenling World Style Shoes Co., Ltd., Taizhou Fuping Shoes Co., Ltd., Zhongqing Inspection and Certification (Wenling) Co., Ltd., China Leather Shoes Research Institute Co., Ltd., Dongguan Hengyu Instrument Co., Ltd., Zhongqing Inspection and Certification Co., Ltd.,

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The previous versions of this document and the documents it replaces are as follows:

- First published in:2016 as GB/T 33393-2016;
- This is the first revision:

Introduction

The issuing organization of this document draws attention to the fact that when stating compliance with this document, it may refer to Chapters 4 and 5 "A method for thermal and moisture resistance of shoes:" Testing device "A testing device and testing method for thermal resistance and moisture resistance of finished shoes" "A testing and analysis equipment for whole shoes" "A testing analyzer for whole shoes The use of patents related to "analyzer and its testing methods":

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a) Name of patent holder: Sichuan Leather Research Institute Address: No: 2, Section 3, North 1st Ring Road, Chengdu City, Sichuan Province

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Test methods for complete footwear - Determination of thermal and moisture resistance

1 Scope

This document describes test methods for the thermal and moisture resistance and moisture absorption and water vapor permeability of complete shoes:

This document is applicable to the determination of thermal resistance, moisture resistance

and moisture absorption and water vapor permeability of the entire shoe that matches the test prosthetic foot:

2 Normative reference documents

GB/T 2703

GB/T 6682-2008

GB/T 22049

3 Terms and definitions

The terms and definitions defined in GB/T 2703 and below apply to this document: 3:1 thermalresistance The ability of the entire shoe to prevent heat loss in the inner cavity of the shoe under certain temperature difference conditions:

Note: The greater the thermal resistance value, the better the warmth retention of the shoe:

3:2 Water-vapourresistancewater-vapourresistance The ability of the entire shoe to prevent the loss of water vapor in the inner cavity of the shoe under a certain pressure difference:

Note: The greater the moisture resistance value, the worse the water vapor permeability of the shoe: 3:3 The ability of water vapor to penetrate the entire shoe under specified conditions and time:

Note: It is usually expressed by the mass of water vapor passing through the entire shoe within a specified period of time: 3:4 The ability of water vapor to be absorbed by the shoe and penetrate the entire shoe under specified conditions and time:

Note: It is usually expressed by the sum of the mass of water vapor absorbed and transmitted through the entire shoe within a specified period of time: 3:5 The ratio of the standard deviation of the sample data to the mean:

Note: The coefficient of variation reflects the stability of the data, also known as the dispersion coefficient: During the test process of this method, after the coefficient of variation of the wet resistance and thermal resistance value reaches the set value, the The temperature gradient and humidity gradient formed by the prosthetic foot-whole shoe-environment are in a stable state: