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

GB/T 20991-2024

Replacing GB/T 20991-2007

Foot protection - Test methods for footwear

足部防护 鞋的测试方法

(English Translation)

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Table of Contents

Preface	
1 Scope	
2 Normative references	
3 Terms and Definitions	
4 General requirements	
4.1 Sampling	
4.2 Adjustment	
4.3 Test requirements	
4.4 Test Report	
5 Test methods for finished shoes	
5.1 Ergonomic requirements	
5.2 Determination of the bonding strength between the upper and outsole/the bonding strength between the outsole and the middle layer	
5.3 Determination of the size of the protective toe cap	
5.4 Determination of impact resistance	
5.5 Determination of pressure resistance	
5.6 Features of Protecting Packet Headers	
5.7 Determination of leak-proofness	
5.8 Determination of the size of the puncture-proof pad	
5.9 Determination of the puncture resistance of metal anti-puncture pad shoes	
5.10 Determination of the puncture resistance of non-metallic anti-puncture pad shoes	
5.11 Characteristics of puncture-proof pads	
5.12 Determination of folding resistance of puncture-proof pads	
5.13 Determination of resistance	
5.14 Determination of anti-slip properties	
5.15 Determination of thermal insulation	
5.16 Determination of cold resistance	
5.17 Determination of energy absorption in the shoe seat area	
5.18 Determination of waterproofness of finished shoes. water tank test	
5.19 Determination of waterproofness of finished shoes. folding machine test	
5.20 Determination of impact resistance of metatarsal protection devices	
5.21 Determination of ankle protection dimensions	

- 5.22 Determination of the cushioning energy of ankle protection materials incorporated into the upper
- 5.23 Determination of the size of the cut protection area
- 5.24 Determination of cut resistance
- 5.25 Determination of the wear resistance of anti-wear toe caps
- 5.26 Determination of joint strength
- 6 Measurement methods for uppers, linings and tongues
 - 6.1 Determination of shoe upper thickness
 - 6.2 Determination of shoe upper height
 - 6.3 Determination of tear strength of upper/lining/tongue
 - 6.4 Determination of tensile properties of upper materials
 - 6.5 Determination of folding resistance of shoe upper
 - 6.6 Determination of water vapor permeability (WVP)
 - 6.7 Determination of water vapor absorption (WVA)
 - 6.8 Determination of the water vapor coefficient (WVC)
 - 6.9 Determination of pH value
 - 6.10 Determination of hydrolysis resistance of shoe uppers
 - 6.11 Determination of hexavalent chromium content
 - 6.12 Determination of abrasion resistance of linings and insoles
 - 6.13 Determination of water permeability and water absorption of shoe uppers
- 7 Test methods for insoles and insoles
 - 7.1 Determination of inner bottom thickness
 - 7.2 Determination of water absorption and water desorption of insoles and/or insoles
 - 7.3 Determination of insole wear resistance
- 8 Test methods for outsoles
 - 8.1 General Principles
 - 8.2 Determination of outer sole dimensions
 - 8.3 Determination of tear strength of outsole
 - 8.4 Determination of wear resistance of outsole
 - 8.5 Determination of shoe rigidity
 - 8.6 Determination of folding resistance of outsole
 - 8.7 Determination of hydrolysis resistance of outsole
 - 8.8 Determination of oil resistance
 - 8.9 Determination of thermal contact resistance
- Appendix A (Normative) Requirements and test methods for plastic clay cylinders

A.1 Requirement

A.2 Static Test

A.3 Dynamic Test

Appendix B (Informative) Evaluation of shoes during thermal insulation testing

B.1 General Principles

B.2 Basis for evaluation of shoe condition after thermal insulation test

References

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 20991-2007 "Test methods for personal protective equipment footwear". Compared with GB/T 20991-2007, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added the term and definition of "anti-wear toe cap" (see 3.1);
- Changed the sampling and adjustment requirements (see 4.1, 4.2, Chapter 4 of the 2007 edition);
- Deleted the test performance classification in Table 1 (see Table 1 of the 2007 edition);
- Changed the samples and test specimen quantities required for some tests in Table 1 (see Table 1, Table 1 of the 2007 edition);
- Added test requirements (see 4.3);
- Added relevant requirements for test reports (see 4.4, 5.1.3, 5.2.5, 5.3.3, 5.4.4, 5.5.4, 5.6.3, 5.7.4, 5.8.3, 5.9.4, 5.10.5, 5.11.3, 5.12.4, 5.13.5, 5.14.3, 5.15.4, 5.16.4, 5.17.4, 5.18.5, 5.19.5, 5.20.4, 5.21.3, 5.22.5, 5.23.3, 5.24.3, 5.25.3, 5.26.3, 6.1.3, 6.2.3, 6.3.3, 6.4.3, 6.5.3, 6.6.6, 6.7.5, 6.8.2, 6.9.3, 6.10.3, 6.11.3, 6.12.5, 6.13.5, 7.1.3, 7.2.5, 7.3.5, 8.2.2.2, 8.2.3.2, 8.2.4.2, 8.3.3, 8.4.3, 8.5.5, 8.6.5, 8.7.4, 8.8.3, 8.9.4);
- Changed the sampling requirements in the ergonomic requirements, the postures to be used in the test and the questionnaire for evaluating the ergonomic requirements (see 5.1.1, 5.1.2, 5.1 of the 2007 edition);
- Changed the relevant requirements for test equipment (see 5.2.2, 5.4.1, 5.5.1, 5.7.1, 5.9.1, 5.10.2, 5.16.1, 5.17.1, 5.19.2, 5.20.1, 6.6.2, 6.7.2, 6.12.2, 6.13.2, 7.2.2, 7.3.2, 8.5.2, 8.6.2, 5.2.2, 5.4.1, 5.5.1, 5.7.1 of the 2007 edition, 5.8.2.1, 5.13.1, 5.14.1, 5.15.2, 5.16.1, 6.6.2, 6.7.2, 6.12.2, 6.13.2, 7.2.2, 7.3.2, 8.4.1.1, 8.4.2.1);

- Added sampling and adjustment requirements (see 5.2.3, 5.3.1, 5.4.2, 5.5.2, 5.6.1, 5.7.2, 5.8.1, 5.9.2, 5.10.3, 5.11.1, 5.12.2, 5.13.3, 5.14.1, 5.15.2, 5.16.2, 5.17.2, 5.18.3, 5.19.3, 5.20.2, 5.21.1, 5.22.3, 5.23.1, 5.24.1, 5.25.1, 5.26.1, 6.1.1, 6.2.1, 6.3.1, 6.4.1, 6.5.1, 6.6.3, 6.7.3, 6.9.1, 6.10.1, 6.11.1, 6.12.3, 6.13.3, 7.1.1, 7.2.3, 7.3.3, 8.2.1, 8.3.1, 8.4.1, 8.5.3, 8.6.3, 8.7.2, 8.8.1, 8.9.2);
- Added the determination of the width of the protective cap hem (see 5.3.2.2);
- Added the calculation method of impact velocity for impact resistance (see 5.4.3.3);
- Changed the test requirements for the characteristics of the protective cap, and added the test requirements and test methods for the stability of the non-metallic protective cap (see 5.6, 2007 edition 5.6);
- Changed the pressure value requirements in the leakproofness test (see 5.7.3, 5.7.3 of the 2007 edition);
- Changed the size requirements of metal anti-puncture test nails and the provisions for replacing test nails (see 5.9.1.2, 5.8.2.1.2 of the 2007 edition);
- Added the puncture resistance test method for non-metallic puncture-resistant insulated shoes (see 5.10);
- Added the test of puncture-proof pad characteristics (see 5.11);
- Changed the requirements for the test environment in the determination of resistance (see 5.13.4, 5.10.3.3 of the 2007 edition);
- Deleted the determination of electrical insulation (see 5.11 of the 2007 edition);
- Added the determination of anti-slip properties (see 5.14);
- Changed the equipment example of the cold resistance determination method (see 5.16.1, 5.13.1 of the 2007 edition)
- Changed the machine test method for the waterproofness test of finished shoes (see 5.19, 5.15.2 of the 2007 edition);
- Added the determination of ankle protection device size (see 5.21);
- Added the determination of the size of the anti-cutting protection area (see 5.23);
- The test method for cut resistance has been changed (see 5.24, 6.14 of the 2007 edition);
- Added the determination of wear resistance of anti-wear toe cap (see 5.25);
- Added the determination of joint strength (see 5.26);
- Changed the test method for upper thickness (see 6.1, 6.1 of the 2007 edition);