

ICS 13.340.50

CCS C 73



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

GB 28288-2025

Replacing GB/T 28288-2012

Foot protection - Protective toecaps

足部防护 足趾保护包头

Issued on: August 29, 2025

Implemented on: September 1, 2026

Issued by: Ministry of Emergency Management

Table of Contents

1	Scope	
2	Normative references	
3	Terms and Definitions	
4	Classification	
5	Technical Requirements	
5.1	General Requirements	
5.3	Dimensions	
6	Test Methods	
10	Minimum internal length/mm	34.0 36.0 38.0 39.0 40.0 42.0
14	Reference	

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 the section on toe protection covers in GB/T 28288-2012 "Foot Protection - Toe Protection Covers and Puncture-Proof Pads". Compared with GB/T 28288-2012, the main technical changes, apart from structural adjustments and editorial modifications, are as follows:

---The scope of application has been changed (see Chapter 1, Chapter 1 of the.2012 edition);

---Added the terminology and definition for toe protection caps (see 3.1);

---The terminology and definitions for inner and outer protective caps have been changed (see 3.2, 3.3, and

3.2 in the.2012 edition);

---Terminology and definitions related to puncture-resistant pads have been removed (see Chapter 3 of the.2012 edition);

---Added a category for toe protection caps (see Chapter 4);

---The general provisions in the technical requirements have been removed (see section 4.1 in the.2012 edition);

- Added general requirements to the technical requirements (see 5.1);
- Added appearance quality requirements for non-metallic protective caps (see 5.2);
- The requirements for hem width have been changed (see 5.3.2, 4.2.2 in the 2012 version);

1 Scope

GB 28288-2025 is the Chinese national standard on foot protection - protective toecaps, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 August 2025 by the Ministry of Emergency Management, and has been in force since 1 September 2026. Classification: ICS 13.340.50, CCS C 73. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document provides a classification of toe protection covers, specifies the technical requirements and markings for toe protection covers, and describes the testing methods. This document applies to toe protection caps used in foot protection equipment.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 12903 Terminology for Personal Protective Equipment

GB/T 20991-2024 Test methods for foot protection footwear

GB 21148 Foot Protection Safety Footwear

3 Terms and Definitions

The terms and definitions defined in GB/T 12903 and GB 21148, as well as the following terms and definitions, apply to this document.

3.1 Toe protection cap Components that provide impact and pressure protection for the toes.

3.2 Toe protection caps installed on the inside of the shoe upper at the toe area.

3.3 Toe protection caps installed on the outer side of the shoe upper at the toe area.

4 Classification

4.1 According to the material, toe protection covers are divided into metal protection covers and non-metal protection covers.

4.2 According to the installation location, toe protection covers are divided into inner protection covers and outer protection covers.

5.1 General Requirements

5.1.1 When no error is specified in this document (text or images), the maximum error of $\pm 10\%$ shall be used.

5.1.2 The performance requirements and test sample quantity for toe protection caps are listed in Table 1.

Note. This document applies to shoe components, not finished shoes. When selecting toe caps based on the test reports provided in this document, finished shoe manufacturers should consider shoe size. Suitability and conformity with the overall performance requirements of the shoe are important reference factors. Appendix A provides guidelines for selecting the appropriate shoe size and toe cap size. relation. Table

1 Performance requirements and number of test samples for toe protection caps
 Performance Requirements Clause Number Metal Protective Cap Non-metal Protective Cap Test Sample Quantity Appearance quality 5.2 -a - 1 pair per pack (size not specified) Internal length 5.3.1 - - 1 pair per pack size Hem width 5.3.2 - - 1 pair per pack size Impact resistance b 5.4 - - 1 pair per pack size Pressure resistance b 5.5 - - 1 pair per pack (head size)

5.6.1 Corrosion resistance of metal protective caps - 3 pieces (different cap sizes) Stability of non-metallic protective cap b 5.6.2 - 1 pair for each treatment A "-" indicates that the performance requirement is met; the absence of a "-" indicates that it is not applicable. b. When the toe cap itself is designed with holes, the holes are not considered as gaps through which light can pass during evaluation.

5.2 Appearance Quality The toe cap should be smooth, free of burrs, and free of material or manufacturing defects. The material layers of the non-metallic protective cap should be free from cracks or delamination.

5.3 Dimensions

5.3.1 Internal Length After testing according to the method specified in 6.2.1, the minimum

internal length of the toe protection cap should meet the requirements of Table 2. Table

2 Minimum internal length of toe protection cap Protected packet header number <=5 6 7 8
9 >=

10 Minimum internal length/mm. 34.0 36.0 38.0 39.0 40.0 42.0

5.3.2 Hem width After testing according to the method specified in 6.2.2, the width e of the rolled edge of the metal protective bag should not exceed 12mm, and the width e of the rolled edge of the non-metallic protective bag should not exceed 12mm. The angle e should not exceed 15mm.

5.4 Impact resistance After testing according to the method specified in 6.3, the minimum spacing inside the toe protection cover should meet the requirements of Table 3, and the toe protection cover should not... It should produce sharp edges or any gaps that penetrate the material (such as gaps that allow light to pass through).