

**BUREAU OF INDIAN STANDARDS****DRAFT FOR COMMENTS ONLY***(Not to be reproduced without permission of BIS or used as an Indian Standard)*

भारतीय मानक मसौदा

निजी सुरक्षा उपकरण

भाग 2 सुरक्षा फुटवियर

(तीसरा पुनरीक्षण)

*Draft Indian Standard***Personal Protective Equipment****Part 2 Safety Footwear***(Third Revision)*

(ICS 13.340.50)

**Footwear Sectional Committee, CHD 19****Last Date for Comments: 14-04-2024**

Footwear Sectional Committee, CHD 19

**NATIONAL FOREWORD***(Formal clause shall be added later)*

This document specifies basic and additional (optional) requirements for safety footwear used for general purpose. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour. It also specifies requirements for safety footwear equipped with customized insoles, customized safety footwear or individual manufactured customized safety footwear. This standard does not cover the property of high visibility because of interaction with the clothing (e.g. trousers cover the footwear) and work area conditions (e.g. dirt, mud).

This Indian Standard is published in several parts. The other parts in this series are:

Part 1 Test Methods for footwear

Part 3 Protective footwear

Part 4 Occupational footwear

Part 5 Additional requirements and test methods

Part 6 Additional specifications for safety footwear

Part 7 Additional specifications for protective footwear

Part 8 Additional specification for occupational footwear

This standard was originally published in 2002 which was identical to ISO 8782-2: 1998. The standard was revised in 2011 by adopting ISO 20345:2004 which was revision of ISO 8782-2. The standard was subsequently revised in 2016 to adopt the latest version of ISO 20345.

This third revision has been undertaken to adopt the latest version of ISO 20345:2021 along with amendment no. 1, published in 2024. During this revision, following changes have been made:

- i. Revision of the terms and definitions in Clause 3;
- ii. Figure 1 to Figure 4 revised;
- iii. Tables 1, 2 and 3 revised;
- iv. Heel area defined (5.2.3);
- v. Toe protection, depending on ISO 22568-1 and ISO 22568-2, exchanging EN 12568:2010;
- vi. Requirement on slip resistance revised (5.3.5 and 6.2.10); marking “SRA, SRB and SRC” deleted; Marking “SR” and “Ø” introduced;
- vii. Ph value and chromium VI tests added in 5.3.6; former separate clauses under upper, lining, tongue and insole/insock deleted;
- viii. Requirement for seam strength of hybrid footwear added (5.3.7);
- ix. Requirement for upper materials not fulfilling WVP explained (5.4.6);
- x. Abrasion of insoles revised (5.7.4);
- xi. Outsole requirements revised (5.8);
- xii. Outsole thickness revised (5.8.2.1);
- xiii. Flexing resistance of outsole clarified (5.8.5);
- xiv. Perforation resistant insert, depending on ISO 22568-3 and ISO 22568-4, exchanging EN 12568:2010; xv. Tolerance added (6.2.3.1);
- xv. Former Annex A Hybrid footwear included in the general text (Table 2, 5.4.1.2);
- xvi. Optional requirement of metatarsal protection revised (6.2.6);
- xvii. Optional requirement on ankle protection clarified (6.2.7);
- xviii. Optional requirement for “SC” scuff cap abrasion added (6.2.9);

- xix. Water penetration and absorption, symbol “WRU” deleted, symbol “WPA” introduced;
- xx. Optional requirement for “LG” Ladder grip of outsoles added (6.4.3);
- xxi. Marking revised (Table 16 and Table 20);
- xxii. Two new categories added, S6 and S7 (Table 20);
- xxiii. Information on obsolescence date added (8.5);
- xxiv. Annex A with requirements for customized safety footwear added;
- xxv. Annex B added;
- xxvi. Annex C added; and
- xxvii. Requirement for electrically insulating footwear (EN 50321) deleted.

Subsequently, ISO has published an amendment no. 1 to this standard, which has been adopted with the revised version. In this amendment, following changes have been made:

- i. Normative Reference has been updated;
- ii. Clause 5.3.2.5, 5.3.2.6, 5.3.2.7, 5.3.3, 5.3.6, 5.4.1.1, 5.4.1.2, 5.4.6, 5.5.4, 5.5.4, 5.7.3, 5.7.4.1, 5.8.5, 5.8.7, 6.1, 6.2.1.1.3, 6.2.1.1.4, 6.2.1.3, 6.2.1.3, 6.2.7, 6.2.9, 6.2.9, 7 e), 8.2, 8.2.2, 8.4 has been modified;
- iii. Table 2 and table 16 has been modified;
- iv. Bibliography has been updated.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker in the International Standard, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are given below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
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ISO 20344 : 2021 Personal protective equipment — Test methods of footwear	Doc. No. CHD/19/19020 IS 15298 (Part 1) : 20XX Personal protective equipment : Part 1 Test methods of footwear ( <i>Third Revision</i> )	Identical with ISO 20344 : 2021
ISO 22568-2:2019, Foot and leg protectors — Requirements and test methods for footwear component — Part 2: Non-metallic toecaps	IS 5852 (Part 2): 2019 Toe Caps for Protection of Feet - Specification Part 2 Non-Metallic Toe Caps	Identical with ISO 22568-2: 2019

This standard also makes a reference to the packing and BIS Certification Marking of the product. Details of which is given in National Annex A.

The technical committee has reviewed the provisions of the following International Standards referred in this standard and has decided that they are acceptable for use in conjugation with this standard:

International Standard	Title
EN 13832- 3:2018	Footwear protecting against chemicals — Part 3: Requirements for footwear highly resistant to chemicals under laboratory conditions
ISO 22568-1:2019	Foot and leg protectors — Requirements and test methods for footwear components — Part 1: Metallic toecaps

Conditioning and test atmospheres stipulated in this standard may not be applicable to tropical/subtropical countries like India. The applicable Standard Atmospheric Conditions (SAC) for Indian conditions are  $27 \pm 2^{\circ}$  C and  $65 \pm 5$  percent relative humidity and may be observed while using this standard.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'.

## NATIONAL ANNEX A

### *(National Foreword)*

**A-1 PACKING** Packing shall be as agreed to between the purchaser and the supplier.

**A-1.1** Each pair of footwear shall be supplied with the following information in English and any other language:

- a) Name and full address of manufacturer,
- b) Details of customer care service provider,
- c) Instruction for storage and maintenance,
- d) For instructions on cleaning and drying, (*see* IS 6519),

### **A-2 MARKING**

**A-2.1** Each footwear shall be permanently marked with the following:

- a) Size,
- b) Manufacturer's name and brand,
- c) Year and month of manufacture,
- d) Number and year of the standard, based upon which the footwear are produced, and
- e) Any other statutory marking.

**A-2.2 BIS Certification Marking** The footwear may also be marked with the Standard Mark. All markings shall be made inside of tongue or at top outer face of the footwear so that least damage is done during working.

**A-2.2.1** The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.