AS 2210.2:2019
ISO 20344:2011

AS 2210.2:2019

Australian STANDARD

# Personal protective equipment

# Method 2: Test methods for footwear

STANDARDS Australia

AS 2210.2:2019

This Australian Standard® was prepared by SF-003, Occupational Protective Footwear. It was approved on behalf of the Council of Standards Australia on 16 January 2019.

This Standard was published on 20 February 2019.

The following are represented on Committee SF-003:

Association of Accredited Certification Bodies
Australasian Fire and Emergency Service Authorities Council
Australian Chamber of Commerce and Industry
Australian Industry Group
BSI Group Australian and New Zealand (Certification Bodies)
Department of Defence (Australian Government)
Energy Networks Australia
Footwear Manufacturers Association of Australia
VicLab (Testing Interests Australia)

This Standard was issued in draft form for comment as DR AS 2210.2:2018.

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ISBN 978 1 76072 354 5

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Originated as part of AS Z2—1952 and AS Z3—1952.
Previous editions AS/NZS 2210.2:1994, AS/NZS 2210.2:2000 and AS/NZS 2210.6:2001.
Jointly revised, amalgamated and designated as AS/NZS 2210.2:2009.
Second edition 2019.



Published by SAI Global Pty Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia.

# Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee SF-003, Occupational Protective Footwear, to supersede AS/NZS 2210.2:2009, *Occupational protective footwear, Part 2: Test methods (ISO 20344:2004, MOD)*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify methods for testing footwear designed as personal protective equipment.

This Standard is an adoption with national modifications, and has been reproduced from, ISO 20344:2011, *Personal protective equipment — Test methods for footwear*. The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the variations for the application of this Standard in Australia.

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text "this International Standard" should read "this Australian Standard".

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

# Contents

# 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 20344 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 161, *Foot and leg protectors*, in collaboration with ISO Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 3, *Foot protection,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 20344:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO 20344:2004/Cor.1:2005 and the Amendment ISO 20344:2004/Amd.1:2007.

The main differences between this edition and the 2004 edition are:

— Annex A, inclusion of a new procedure for plasticine calibration;

— Annex C, inclusion of a new table for footwear sizing;

— 4.1, Table 1, clarification of the method for sampling;

— 5.1, clarification on testing of ergonomic features;

— 5.4 and 5.5, inclusion of a reference to EN 12568:2010;

— 5.8.3, different test methods for anti-penetration insoles;

— 5.15.2, inclusion of a new test method for water resistance;

— 6.4.2 and 6.5.2, inclusion of test methods (due to the withdrawal of ISO 2023);

— 6.11, replacement of the method for determination of chromium VI by a reference to ISO 17075;

— withdrawal of 5.11, "Determination of the electrical insulation".

# Australian Standard®

## Personal protective equipment

## Method 2: Test methods for footwear

### Section 1 Scope

This International Standard specifies methods for testing footwear designed as personal protective equipment.

### Section 2 Normative references

The following referenced documents are indispensable for the application 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 34-1:2010, *Rubber, vulcanised or thermoplastic — Determination of tear strength — Part 1: Trouser, angle and crescent test pieces*

ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

ISO 1817:2011, *Rubber, vulcanised — Determination of the effect of liquids*

ISO 3290-1, *Rolling bearings — Balls — Dimensions and tolerances*

ISO 3376, *Leather — Physical and mechanical tests — Determination of tensile strength and percentage extension*

ISO 3377-2, *Leather — Physical and mechanical tests — Determination of tear load — Part 2: Double edge tear*

ISO 4045, *Leather — Determination of pH*

ISO 4643:1992, *Moulded plastic footwear — Lined or unlined poly (vinyl chloride) boots for general industrial use — Specification*

ISO 4649:2010, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 4674-1:2003, *Rubber- or plastics-coated fabrics — Determination of tear resistance — Part 1: Constant rate of tear methods*

ISO 5423:1992, *Moulded plastic footwear — Lined or unlined polyurethane boots for general industrial use — Specification*

ISO 13287, *Personal protective equipment — Footwear — Test method for slip resistance*

ISO 17075, *Leather — Chemical analysis — Determination of chromium VI*

ISO 20345:2011, *Personal protective equipment — Safety footwear*

ISO 20347, *Personal protective equipment — Occupational footwear*

ISO 23529:2010, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

EN 388:2003, *Protective gloves against mechanical risks*

EN 12568:2010, *Foot and leg protectors — Requirements and test methods for toecaps and penetration-resistant inserts*