

AS 1801—1981

AS 1801

Australian Standard<sup>®</sup>

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## Industrial safety helmets

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[Title allocated by Defence Cataloguing Authority:  
HELMET, SAFETY (Industrial) NSC 8415]

THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Gas Association  
Australasian Institute of Mining and Metallurgy  
Bureau of Steel Manufacturers of Australia  
Confederation of Australian Industry  
Department of Industrial Relations, N.S.W.  
Department of Labour and Industry, Vic.  
Department of Mines and Energy, N.T.  
Department of Productivity  
Electricity Supply Association of Australia  
Health Commission of New South Wales  
Joint Coal Board  
Metal Trades Industry Association of Australia  
Metropolitan Water Sewerage and Drainage Board, N.S.W.  
National Safety Council of Australia (N.S.W. Division)  
Safety Institute of Australia  
Telecom Australia

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This standard, prepared by Committee SF/18, Industrial Safety Helmets, was approved on behalf of the Council of the Standards Association of Australia on 24 July 1981, and was published on 12 October 1981.

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*This standard was issued in draft form for public review as DR 80029.*

**AUSTRALIAN STANDARD**

**INDUSTRIAL SAFETY  
HELMETS**

**AS 1801—1981**

First published (as AS Z10) .....	1961
Revised .....	1964
Revised .....	1967
AS 1801 first published .....	1975
Second edition .....	1981
Amended .....	August 1982
Reprinted incorporating amendment .....	1984

PUBLISHED BY STANDARDS AUSTRALIA  
(STANDARDS ASSOCIATION OF AUSTRALIA)  
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 2381 6

## PREFACE

This edition of this standard was prepared by the Association's Committee on Industrial Safety Helmets, under the supervision of the Safety Standards Board, to supersede AS 1801—1975.

Significant variances from the 1975 edition include the following:

- (a) Limits on the maximum dimensions of any internal projections have been included.
- (b) Recommendations that a range of sizes of helmets be produced have been included.
- (c) Provision of a nape strap either as an integral part of, or an attachment to, the headband has been specified.
- (d) Recommendations for any cable clip retention systems have been included.
- (e) Restriction on helmet mass has been deleted, provided that helmets exceeding 400 g are appropriately labelled.
- (f) Requirements for the heat stability of helmet shells have been modified (to align with ISO) and additional requirements for helmets designed for use in hot work environments have been specified.
- (g) The restrictions on ventilation holes in shells have been relaxed.
- (h) Additional marking requirements have been specified.
- (j) For the purpose of type approval of helmets to this standard, the number of test methods for shock absorption has been reduced to one deceleration test. (For quality control and certification tests, see below).
- (k) Headforms for impact-testing purposes have been specified as common to those specified in AS 1698 and AS 2063.
- (l) Advice on design aspects especially appropriate to helmets used in coal mining has been included in an advisory appendix.

During the preparation of this edition, close attention was given to the requirements of ISO 3873, Industrial Safety Helmets. In accordance with the Association's policy, requirements were aligned with those of ISO 3873 wherever possible. However, in some instances Australian experience with helmets having superior qualities, e.g. resistance to crushing,

was acknowledged as preventing acceptance of the lesser requirements specified by ISO. These increased levels of performance, which have been recommended for adoption by ISO, are—

- (i) increased levels of resistance to crushing have been retained;
- (ii) all helmets are required to provide protection against electric shock hazards;
- (iii) metal headforms have been specified for test purposes;
- (iv) requirements for nape straps have been included; and
- (v) warning markings for safe use and maintenance have been specified.

Although this edition of the standard provides for only one method of testing the shock absorption performance of helmets for type approval purposes, it has been agreed that the previous alternative method and equipment, i.e. aluminium bar method, may be used for quality control purposes, i.e. comparative testing. Advice on the use and limitation of this method is given in Appendix H.

Purchasers may require evidence of compliance of helmets with the provisions of this standard. In this regard attention is drawn to the Notes to Clause 7 dealing with marking of products and the quality assurance and certification scheme operated by the Standards Association of Australia.

This standard requires reference to the following standards:

AS 1270	Hearing Protection Devices
AS 1337	Eye Protectors for Industrial Applications
AS 1698	Protective Helmets for Vehicle Users
AS 1716	Respiratory Protective Devices
AS 1815	Method for Rockwell Hardness Test Part 1—Testing of Metals
AS 1816	Method for Brinell Hardness Test Part 1—Testing of Metals
SAE J211b	Recommended Practice for Instrumentation for Impact Tests

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