

2063,  
part 1

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# Australian Standard 2063, Part 1—1982

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**LIGHTWEIGHT PROTECTIVE HELMETS  
(FOR USE IN PEDAL CYCLING, HORSE  
RIDING AND OTHER ACTIVITIES  
REQUIRING SIMILAR PROTECTION)  
Part 1—BASIC PERFORMANCE  
REQUIREMENTS**



**STANDARDS ASSOCIATION OF AUSTRALIA**  
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This Australian standard was prepared by Committee CS/14, Safety Helmets for Sport and Recreation. It was approved on behalf of the Council of the Standards Association of Australia on 23 February 1982 and published on 21 June 1982.

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The following interests were represented on the committee responsible for the preparation of this standard:

Adelaide Children's Hospital Incorporated  
Australia Post  
Australian Amateur Cyclists Association  
Australian Amateur Cycling Association  
Australian Chamber of Commerce  
Australian Federation of Consumer Organizations  
Australian Jockey Club  
Australian Retailers Association  
Australian Trotting Council  
Bicycle Federation of Australia  
Confederation of Australian Industry  
Confederation of Australian Motor Sport  
Department of Defence  
Department of Motor Transport, N.S.W.  
Health Commission of New South Wales  
National Safety Council of Australia, N.S.W.  
National Safety Council of Australia, Qld  
National Safety Council of South Australia  
Pony Club Association of Victoria  
Royal Melbourne Institute of Technology

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AUSTRALIAN STANDARD

**LIGHTWEIGHT PROTECTIVE HELMETS  
(FOR USE IN PEDAL CYCLING,  
HORSE RIDING AND OTHER  
ACTIVITIES REQUIRING SIMILAR  
PROTECTION)**

**Part 1  
BASIC PERFORMANCE  
REQUIREMENTS**

**AS 2063, Part 1—1982**

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## PREFACE

This edition of this standard was prepared by the Association's Committee on Safety Helmets for Sports and Recreation, to supersede AS 2063—1977, General Purpose Protective Helmets (For Use in Pedal Cycling, Horse Riding and Other Activities Requiring Similar Protection).

The committee was initially constituted at the request of the Association's Consumer Standards Advisory Committee to prepare a standard for helmets for pedal cyclists. However, the Association had also been requested to prepare a standard for protective helmets for pony and horse riders and it was decided that the hazards and the standard of protection required by these two groups were so similar that one standard would suffice. Furthermore, in the course of preparing the standard, the committee considered that helmets complying with the performance requirements specified would be appropriate for use in other activities in which head protection is required, but where conditions of use dictate that a helmet is acceptable only if it is light and compact. Helmets to AS 1698 are likely to give greater protection than those complying with this standard and may be preferred where their greater bulk and mass are tolerable.

The committee recognized the fact that different activities might require helmets of different design. The standard therefore concentrated on specifying the performance requirements in relation to shock attenuation, penetration resistance, strength of the retention systems and its attachment points and peripheral vision clearance. The only restrictions it placed on design were those relating to the construction, e.g. a helmet must have a hard shell, a means of absorbing impact energy and a retention system.

When the committee considered revisions to the standard, in the way of additional special requirements for certain sporting activities, it decided that the wording 'basic performance requirements for lightweight protective helmets' was a more appropriate description than the wording in the original title. The specifications for any special requirements could then be added as separate parts when the need for such arose. No changes have been made in this edition to the performance requirements.

However an important amendment has been made to the labelling requirements. Manufacturers are now required to label both the helmet and the outer package with the mass of the helmet and the activity/activities for which it was designed.

This additional information will assist the user in purchasing an appropriate helmet.

Research undertaken by the committee indicated that, given the incentive, manufacturers could design and produce suitable helmets for children in the A and B headform sizes to comply with the performance requirements of this standard. Specifications of a maximum mass for each headform size was considered, but it was decided that this was not possible until further research and development work was completed. Nevertheless it was agreed to include, in an appendix, recommendations in this regard as an indication of what is currently achievable.

A major editorial change is due to the Association's decision to publish individual methods for testing helmets as parts of a separate standard. As a result, this standard specifies the performance criteria but refers to the relevant standards for the methods of testing.

A separate standard is being developed for protective helmets for use in ball games where the user runs the risk of a blow on the head from a ball or puck travelling at high speed.

It is strongly recommended that, in view of the nature of this standard, manufacturers and purchasers should make use of the scheme operated by the Standards Association of Australia (see Note to Clause 7) whereby the product may bear the certification mark of the SAA.

This standard requires reference to the following standards:

AS 2512	Methods for Testing Safety Performance of Protective Helmets
2512.1	Definitions and Headforms
2512.2	General Requirements for the Conditioning and Preparation of Test Specimens and Laboratory Conditions
2512.3.1	Determination of Impact Energy Attenuation—Helmet Drop Test
2512.4	Determination of Penetration Resistance
2512.5	Determination of Strength of Retention System and Its Attachment and Its Attachment Points
2512.6	Measurement of Peripheral Vision Clearance

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**STANDARDS ASSOCIATION OF AUSTRALIA****Australian Standard****for****LIGHTWEIGHT PROTECTIVE HELMETS (FOR USE IN PEDAL CYCLING, HORSE RIDING AND OTHER ACTIVITIES REQUIRING SIMILAR PROTECTION)****PART 1—BASIC PERFORMANCE REQUIREMENTS****FOREWORD**

Helmets which comply with this standard are considered suitable for activities where the wearer is likely to be thrown or to fall from a height, particularly while mobile. They are not however to be used by motor cyclists on public roads or other public places where the various State and Territory Traffic Regulations require the use of helmets complying with AS 1698 nor are they to be used for high-speed sports such as motor cycle racing and car racing.

Occupants of passenger cars seeking personal head protection might find helmets complying with AS 1698 too heavy and bulky for everyday use, whereas helmets complying with this standard might well be acceptable, but the degree of protection provided could not realistically be as great as that provided for in AS 1698 although the impact forces might be similar.

The standard is based on the testing and construction principles of AS 1698, but the levels of performance for shock absorption and penetration have been reduced to give the maximum protection possible, it being borne in mind that the bulk and the mass of a helmet are important factors as these could affect the comfort and movement of the wearer, particularly in some sporting activities.

For the guidance of manufacturers, maximum mass limits are recommended in Appendix B for each of the headform sizes specified in the standard.

The protection given by a helmet depends on the circumstances of the accident and the wearing of a helmet cannot always prevent death or long-term disability. A proportion of the energy of an impact is absorbed by the helmet, thereby reducing the force of the blow sustained by the head. The structure of the helmet may be damaged in absorbing this energy and any helmet which sustains a severe blow should be replaced even if damage is not apparent.

To achieve the performance of which it is capable and to ensure stability on the head, a helmet should be as closely fitting as possible consistent with comfort, and it must be securely fastened, with the retaining strap under tension at all times.

Although the standard does not specify the colour of helmets it is recommended that helmets designed specifically for use by pedal cyclists on the road be manufactured in colours within the yellow to orange spectrum which add to the conspicuity of the cyclist.