

Australian Standard[®] 2416—1985

DESIGN AND APPLICATION OF WATER SAFETY SIGNS



STANDARDS ASSOCIATION OF AUSTRALIA
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This Australian standard was prepared by Committee MS/3/1, Water Safety Signs and Symbols. It was approved on behalf of the Council of the Standards Association of Australia on 2 April 1985 and published on 7 June 1985.

The following interests are represented on Committee MS/3/1:

Australian Federation of Consumer Organizations
Council of Australasian Spa and Pool Associations Ltd
Department of Leisure, Tourism and Sport, N.S.W.
Industrial Design Institute of Australia, N.S.W. Chapter
Institute of Professional Lifeguards and Beach Management
Local Government Association of New South Wales
Maritime Services Board of New South Wales
Ministry of Immigration and Ethnic Affairs, Vic.
National Safety Council of South Australia
Pool Superintendents Association of Australia
Royal Life Saving Society of Australia
Surf Life Saving Association of Australia
University of New South Wales
Water Safety Council, N.S.W.

Representatives of the Graphic Design Department of the Swinburne Institute of Technology also participated in the drafting of this standard.

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Shirley

AS 2899.2

David Freeman has been contacted three or more times. He will now produce the requirements to do so. Your references will be made in Catalogue to

Chris

AS 2416 Change and Application of labels daily signs p. 121.
The artwork and banner should be in the last reference are unacceptable - David Freeman suggests that we refer people to AS 2899 part 2.

Re: _____
File No: _____
Date: 1990-10-12
From: Chris

PLEASE CIRCULATE: cc: 29
return to Shirley All
Memo to: _____

AUSTRALIAN STANDARD

DESIGN AND APPLICATION OF WATER SAFETY SIGNS

AS 2416—1985

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PREFACE

This edition of this standard was prepared by the Association's Committee on Water Safety Signs and Symbols, to supersede AS 2416—1980. The standard was originally prepared at the request of the Water Safety Council of New South Wales. Statistics kept by the Council of fatal and serious accidents in creeks, rivers, dams, swimming pools and the surf indicated that warnings of hazardous conditions in these areas were needed in an effort to reduce the number of accidents.

Because of the large number of non-English-speaking citizens in the population who are unfamiliar with the local conditions encountered in some water sports, it was agreed that symbols rather than words should be used wherever possible.

This revised edition contains nine new signs for which new symbols had to be designed and tested.

The five signs included in the 1980 edition of the standard have been widely adopted by local government organizations having jurisdiction over surfing beaches. This has been largely due to the efforts of the Surf Life Saving Association of Australia whose members are well aware of the need for effective safety signs.

CONTENTS

	<i>Page</i>
FOREWORD	3
SPECIFICATION	5
1 Scope	5
2 Purpose	5
3 Referenced Documents	5
4 Definitions	5
5 Design	5
6 Flags	5
7 Symbol Signs	6
APPENDIX A. STANDARD WATER SAFETY SYMBOL SIGNS	7
TABLE A1. SYMBOL SIGNS FOR WATER SAFETY	8

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

DESIGN AND APPLICATION OF WATER SAFETY SIGNS

FOREWORD

In considering standardization of signs and symbols for surfing beaches, the committee responsible for the standard took into account the widespread adoption throughout Australia, by council by-laws, of the flags used by the Surf Life Saving Association of Australia and these have been included in this standard.

A questionnaire was circulated to local government authorities and water sporting associations asking them to nominate the areas in which they believe a symbol sign would help to reduce the risk of accidents. From the replies received and from consideration of the drowning and accident statistics available, a need for the following signs was established:

- Swimming permitted
- Swimming prohibited
- Surfboard riding permitted
- Surfboard riding prohibited
- Water skiing permitted
- Water skiing prohibited
- Scuba diving permitted
- Scuba diving prohibited
- Snorkling permitted
- Snorkling prohibited
- Fishing permitted
- Fishing prohibited
- Spear fishing prohibited
- Beware of stingers
- Beware of sharks
- Beware deep water
- Beware sudden drop-off
- Beware rip or strong current
- Beware shallow water—do not dive
- Beware underwater hazards

The fishing prohibited sign was requested for use particularly on bridges over waterways used extensively for water skiing, boating, etc.

The symbols were chosen after a program of testing had been carried out in accordance with AS 2342, Part 3.

In the first series of tests, three variations of each symbol were tested. These were chosen by the committee from those currently being used by the national parks and wildlife services in the U.S.A., Sweden and Australia and from those proposed by the World Surf Life Saving Association.

In the second series of tests, new symbol signs were designed in accordance with AS 2342, Parts 4 and 5 to provide consistency in the design of the set as a whole.

The people who helped test these symbols included members of Literacy Board classes, school children, factory workers and people on beaches.

Several tests were undertaken because of the high percentage of misinterpretations of the warning signs for deep water, shallow water, underwater hazards and stingers. With the exception of shallow water and underwater hazards, symbols which complied with the acceptance criteria specified in AS 2342, Part 3 were found for all of the signs. As the shallow water sign was needed to warn people not to dive, it was decided that the Diving Prohibited sign used in conjunction with a supplementary SHALLOW WATER plate would adequately cover this problem area.

Efforts were also made to find symbols which would differentiate between the deadly box jelly fish and other stingers. As no acceptable symbol was found for the former, the committee decided that a Swimming Prohibited sign should be used in conjunction with the warning sign for stingers on beaches frequented by box jelly fish during certain months of the year.

The referent 'Underwater Hazards' was found to be too broad and further work will have to be undertaken to determine clearly which hazards, if any, need to be identified for the safety of the public.

While test results indicated that a high proportion of the 'user population' is likely to correctly interpret these water safety signs on first sight, an education program should be undertaken to ensure that the symbol signs achieve the function for which they have been designed, i.e. to communicate without the use of words. For this reason, details of the test results are given for each sign to indicate the degree of teaching needed.

SAA is currently developing a teaching kit for primary schools, the aim of which is to teach children the meanings of the symbol signs for water safety, roads and hospitals and the codings used consistently to convey basic instructions.

Although a test for legibility has not yet been developed for inclusion in AS 2342, the testing program did include a simple legibility test. On the results of both the recognition and legibility tests carried out on the first set of symbols, it was decided to adopt the water safety symbols used by the U.S. National Park Service. Permission to use these symbols has been granted by the United States Department of Interior.

The signs are illustrated in this standard in colours which approximate those specified in AS 2342, Part 5. For manufacturing purposes, artwork is available in AS 2342, Part 7 either in single sheet form on a grid for drawing purposes or as a bromide. The latter is intended for manufacturers using photographic techniques for making screens. The number allotted to each symbol in AS 2343, Part 7 is given in Table A1 of Appendix A for ordering purposes.

Other symbols will be added from time to time as the need for these is determined. One such symbol which is in the course of development and testing is the symbol for wind surfing. The encroachment of wind surfers on areas normally set aside for swimmers and surfers has resulted in some serious accidents. The signs, when developed, will be used to identify areas where wind surfing is permitted or prohibited.

S P E C I F I C A T I O N

1 SCOPE. This standard sets out requirements for the design and application of flags and safety signs incorporating graphic symbols, intended for use where water sports may be undertaken.

2 PURPOSE. The purpose of this standard is to provide a uniform basis for identification of—

- (a) hazardous conditions;
- (b) areas on surfing beaches patrolled by lifesavers;
- (c) areas where certain water sports are prohibited or permitted; and
- (d) the location of first aid and rescue equipment; with the aim of reducing the risk of drownings and serious accidents.

NOTES:

1. The responsibility for selection and erection of the particular type of sign or flag rests with the authority which has jurisdiction over the site on which these are to be used.
2. Symbols denoting activities such as swimming can be used on either positive or negative signs. To avoid unnecessary use of symbol signs it is recommended that such symbols should be used as far as possible only in the negative sense to indicate areas where such activities are prohibited.

3 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

- AS 2342** The Design and Use of Graphic Symbols and Public Information Symbol Signs
 Part 1—General Principles
 Part 2—Method of Determining the Need for a Symbol and for Establishing the Design Criteria
 Part 3—Test Procedures for Evaluating Graphic Symbols and Symbol Signs
 Part 4—Principles for the Design of Graphic Symbols
 Part 5—Design of Signs Incorporating Symbols
 Part 6—Guidelines for the Implementation of Symbol Signs Systems
 Part 7—Index and Presentation of Standard Graphic Symbols and Symbol Signs in Single Sheet Form *

AS 2700 Colour Standards for Paints and Related Materials*

* In Course of preparation.

4 DEFINITIONS. For the purpose of this standard, the following definitions apply (as given in AS 2342, Part 1):

4.1 Referent—a precise statement of what the symbol and symbol sign stands for.

4.2 Function—details of the purpose of the symbol.

4.3 Field of application—areas where the symbol is likely to be used.

4.4 Standard symbol sign—a symbol sign approved by the Standards Association of Australia.

4.5 Symbol set—an integrated range or series of graphic symbols for use in a defined field of application.

5 DESIGN. Water safety signs incorporating graphic symbols shall be designed in accordance with AS 2342, Part 5.

6 FLAGS.

6.1 Design. Flags for use on surfing beaches and waterways shall be designed in accordance with the requirements specified in Table 1.

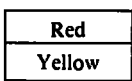
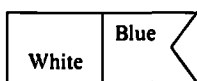
6.2 Application.

6.2.1 Patrolled surf bathing area. As the patrolled surf bathing area on beaches can alter from day to day owing to changes in the weather, surf patrol flags complying with Clause 6.1 shall be used to designate the area which is most closely supervised and/or patrolled.

The surf patrol flags shall be attached to poles and erected so that the lowest point of the flag is not less than 2.1 m and not more than 3 m above the immediate ground level. They shall be positioned so that they can be readily seen by persons in or approaching the swimming area.

A temporary unsafe condition for surf bathing shall be indicated by the removal of the flags and the erection of the Swimming Prohibited symbol sign (see Table A1 of Appendix A). The outside diameter of the red circular enclosure shall be not less than 750 mm. The sign or signs shall be erected so that the lowest point of the red enclosure is not less than 2.1 m and not more than 3 m above the immediate ground level and shall be positioned in such a way that they

TABLE 1
DESIGN AND APPLICATION OF WATER SAFETY FLAGS

Class of flag or disc	Shape, size and design	Colour No AS 2700	Function
Shore Flags Surf Patrol flags	 □ 750 mm min.	R13 Signal Red (Orange Red) Y11 Canary Yellow	To designate surf bathing areas patrolled by lifesavers
Boating Flags * Underwater diving flags		B25 French Blue	To indicate that there is a diver down and that boat drivers must keep their boats clear at least 100 m and proceed at a slow speed

* The flag is that specified in the International Code of Signals.