

# Australian Standard 1512—1981

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## LIFEJACKETS

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[Title allocated by Defence Cataloguing Authority—  
NSC 4220 LIFE PRESERVER, VEST:HOOD AND VEST (For use  
in small boats in partially smooth waters)]



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Association of Australian Port and Marine Authorities  
Australian Water Ski Association  
Australian Yachting Federation  
Chief Secretary's Office, Victoria  
Department of Consumer Affairs, New South Wales  
Department of Defence  
Department of Transport  
Harbours and Marine Department, Queensland  
Manufacturers of Buoyancy Aids  
Maritime Services Board of New South Wales  
Metal Trades Industry Association of Australia  
National Safety Council of South Australia  
New South Wales Police Department  
Royal Volunteer Coastal Patrol

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**AUSTRALIAN STANDARD**

# **LIFEJACKETS**

**AS 1512—1981**

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## PREFACE

This edition of this standard was prepared by the Association's Committee on Buoyancy Aids, as a revision of AS 1512—1979. Apart from changes to the special requirements for the marking of children's lifejackets, this edition is technically unchanged from the 1979 edition.

The standard relates to lifejackets suitable for use in most recreational activities. It should be noted that such lifejackets may not be suitable for use in some applications such as long or hazardous voyages in unfrequented waters.

Guidance on the selection and care of lifejackets is given in AS 2258, Code for the Selection and Care of Buoyancy Aids. Other related Australian standards are as follows:

- AS 1499 Buoyancy Vests
- AS 2260 Buoyancy Garments
- AS 2261 Rescue Buoys
- AS 2262 Float-off Buoyancy Aids

Those requirements which are common to all buoyancy aids are consolidated into a separate standard, viz AS 2259, General Requirements for Buoyancy Aids.

Some statutory authorities and boating organizations may require evidence from manufacturers that their product complies with the provisions of this standard for life-jackets. The 'AS' certification trademark of the Standards Association of Australia (see Clause 3.6) on a lifejacket is an independent assurance of such compliance.

This standard requires reference to:

- AS 2259 General Requirements for Buoyancy Aids
- AS 1177 Methods for Determining the Colour Fastness of Textiles  
Part 2—Colour Fastness to Light—Daylight
- AS K185 Colour of Specific Purposes
- AS 2001.4.14 Methods of Test for Textiles  
Part 4—Colourfastness Tests—Determination of Colourfastness to Seawater

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**STANDARDS ASSOCIATION OF AUSTRALIA**

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**Australian Standard**  
**for**  
**LIFEJACKETS**

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**SECTION 1. SCOPE AND GENERAL**

**1.1 SCOPE.** This standard specifies requirements for lifejackets anticipated for use in small boats in waters where early rescue may be expected.

**1.2 APPLICATION.** Lifejackets shall comply with the requirements of this standard in addition to the relevant requirements of AS 2259.

**1.3 CLASSIFICATION.** Inherently buoyant lifejackets shall be classified in terms of the minimum buoyancy deemed to be adequate for intended wearers, within the ranges of body mass as follows:

- Body mass 40 kg and over
- Body mass 22 kg to 40 kg
- Body mass 12 kg to 25 kg
- Body mass 10 kg to 15 kg

**NOTE:** Owing to the difficulties in design and testing, this standard does not include lifejackets for body mass below 10 kg.

Jackets in the two lower ranges of body mass shall be considered to be 'children's lifejackets'.

Lifejackets relying on inflatable chambers as a source of buoyancy shall be provided only in the two upper ranges of body mass.

## SECTION 2. MINIMUM BUOYANCY AND IN-WATER PERFORMANCE

**2.1 MINIMUM BUOYANCY.** When determined in the manner described in Appendix A of AS 2259, the buoyancy of the lifejacket shall be not less than the following:

<i>Body mass</i>	<i>Buoyancy</i>
40 kg and over .....	87 N
22 kg to 40 kg .....	49 N
12 kg to 25 kg .....	40 N
10 kg to 15 kg .....	35 N

**2.2 IN-WATER PERFORMANCE.** The in-water performance of lifejackets shall be tested in calm fresh water, as follows:

- (a) The wearer shall swim at least three gentle breaststrokes and then, with minimum headway, relax with the head down and the lungs partially filled simulating a state of utter exhaustion.
- (b) Within 5 s the mouth of the wearer shall be brought clear of the water. The wearer shall then be brought to a safe floating position and maintained in that position. A safe floating position is deemed to be such that the body is inclined backwards from the vertical with the nose and mouth clear of the water.

**NOTE:** This test is to determine whether the average wearer can be turned to a safe floating position. It is a comparative test only and a lifejacket which passes this test may not necessarily turn all wearers to a safe floating position in all conditions of use.

## SECTION 3. DESIGN AND CONSTRUCTION

### 3.1 GENERAL DESIGN.

**3.1.1 Collar.** The lifejacket shall be provided with a collar or other suitable means for supporting the head of a floating wearer in the manner described in Clause 2.2. With the lifejacket secured in accordance with the manufacturer's instructions, the portion of the lifejacket behind the neck shall not rise above the wearer's head when entering the water.

**3.1.2 Ability to Withstand Impact.** The lifejacket shall be strong enough to withstand without significant damage an impact equivalent to a wearer falling or jumping into the water from a height of 2 m. On impact, any fastening devices shall remain in the closed position.

**3.2 SOURCE OF BUOYANCY.** The buoyancy of a lifejacket shall be derived essentially from materials specified for the source of buoyancy in AS 2259. Cork or other rigid material shall not be used as a source of buoyancy for children's lifejackets.

NOTE: It is permissible for the collar to have a different source of buoyancy from that used in the body of the jacket.

### 3.3 COLOUR.

**3.3.1 Lifejacket Colour.** The colour of the lifejacket when immersed in water shall approximate one of the following colours from AS K185:

- No 309 Canary Yellow
- No 355 Lemon
- No 356 Golden Yellow
- No 592 International Orange
- No 593 Rail Red

**3.3.2 Colourfastness.** The colourfastness of the lifejacket to the action of sunlight and of seawater shall be as follows:

- (a) *Sunlight.* When the rating is determined in accordance with AS 1177, Part 2, the value obtained shall be not less than 6 on the Blue Wool Standard.
- (b) *Seawater.* When the rating is determined in accordance with AS 2001.4.14, the value obtained shall be not less than 4 on the Grey Scale.

**3.4 STRENGTH OF NECK OPENING AND FASTENING DEVICE(S).** When tested in accordance with Appendix F of AS 2259, the lifejacket, after it has been assembled and fastened in accordance with the manufacturer's instructions, shall withstand, without damage and without slippage of adjustment of fastening devices, a pull of 880 N applied in turn across the fastened jacket and to that part of the jacket intended to support the head.

Children's lifejackets shall be similarly tested, with substitution of a mass of 45 kg for the 90 kg test mass, and shall withstand, without damage and without slippage of adjustment of fastening devices, a pull of 440 N.

**3.5 FASTENINGS FOR CHILDREN'S LIFEJACKETS.** In addition to complying with the relevant requirements of AS 2259, fastenings on a children's lifejacket shall be such that the wearer cannot adjust them in any way.

### 3.6 MARKING.

**3.6.1 General Requirements.** The lifejackets shall be legibly and indelibly marked in a contrasting colour with the following information:

- (i) The manufacturer's name, trade name or trademark.
- (ii) The manufacturing batch identification and the year of manufacture.

NOTE: The manufacturing batch identification should be such as to enable the manufacturer to identify each batch of garments manufactured during the calendar year.

- (iii) The word 'LIFEJACKET' conspicuously placed, in block letters not less than 6 mm high. Beneath that, the words 'May not be suitable for all conditions'.

NOTE: For children's lifejackets, see Clause 3.6.2(i).

- (iv) Intended body mass range.
- (v) Method of donning, securing and adjusting.
- (vi) The words 'FRONT' and 'BACK' in appropriate positions where any possibility of confusion exists.