

Australian/New Zealand Standard

Bunk beds

AS/NZS 4220:1994

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS/3, Safety Requirements for Children's Furniture. It was approved on behalf of the Council of Standards Australia on 8 June 1994 and on behalf of the Council of Standards New Zealand on 29 August 1994. It was published on 29 August 1994.

The following interests are represented on Committee CS/3:

Australian Consumers Association
Australian Furniture Research and Development Institute
Department of Consumer Affairs, N.S.W.
Department of Consumer Affairs, Qld
Department of Health, N.S.W.
Department of Public and Consumer Affairs, S.A.
Federal Bureau of Consumer Affairs
Furniture Manufacturers Association of Australia
Ministry of Consumer Affairs, N.Z.
National Council of Women of Australia
Office of Consumer Affairs, Tas.
Office of Fair Trading and Business Affairs, Vic.
Retailers Council of Australia
Royal Alexandra Hospital for Children
South Australian Health Commission
The Australian Chamber of Commerce and Industry

Review of Standards. To keep abreast of progress in industry, Joint Australian/New Zealand Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Joint Standards and related publications will be found in the Standards Australia and Standards New Zealand Catalogue of Publications; this information is supplemented each month by the magazines 'The Australian Standard' and 'Standards New Zealand', which subscribing members receive, and which give details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Joint Standards, addressed to the head office of either Standards Australia or Standards New Zealand, are welcomed. Notification of any inaccuracy or ambiguity found in a Joint Australian/New Zealand Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian/New Zealand Standard

Bunk beds

First published as Joint Standard AS/NZS 4220:1994.

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA
1 The Crescent,
Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND
Level 10, Standards House,
155 The Terrace,
Wellington 6001 New Zealand

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee on Safety Requirements for Children's Furniture, following concern expressed by the South Australian Health Commission (SAHC) about the number and severity of injuries suffered by children falling from or otherwise injured by bunk beds. It is issued as a Joint Australian/New Zealand Standard under the terms of the Australian/New Zealand Active Cooperation Agreement.

This document has been based on—

- (a) British Standard BS 6998, *Bunk beds*;
- (b) draft International Standard ISO/DP 9098-1, *Furniture—Bunk beds—Safety requirements and testing*, Part 1: *Safety requirements for domestic use* and ISO/DP 9098-2, *Furniture—Bunk beds—Safety requirements and testing*, Part 2: *Test methods*;
- (c) recommendations proposed by the South Australian Health Commission following a survey conducted by their Epidemiology Branch;
- (d) Australian Standard AS 2172, *Cots for household use (safety requirements)*; and
- (e) Australian Standard, AS 1924, *Playground equipment for parks, schools and domestic use*.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
1 SCOPE	4
2 REFERENCED DOCUMENTS	4
3 DEFINITIONS	4
4 MATERIALS	5
5 CONSTRUCTION	6
6 DESIGN	6
7 SAFETY AND PERFORMANCE REQUIREMENTS	12
8 INFORMATIVE LABELLING	13
9 MARKING	14
 APPENDICES	
A FALL-THROUGH AND ENTRAPMENT HAZARDS	15
B STABILITY	18
C FASTENING OF UPPER BED TO THE LOWER BED	19
D FATIGUE TEST ON JOINTS	20
E IMPACT TEST	22
F STATIC LOAD ON GUARDRAILS	24
G IMPACT LOAD ON GUARDRAILS	26
H LADDER ATTACHMENT	29
I STATIC LOAD ON TREADS	31
J IMPACT LOAD ON TREADS	32

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**AS/NZS 4220:1994****Bunk beds**

1 SCOPE This Standard specifies safety requirements for bunk beds. These requirements include those such as material, construction, design, and performance, all of which are important for the well-being of the users (especially children) of bunk beds.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1647 Children's toys—Safety requirements

1647.2 Part 2: Constructional requirements

1647.3 Part 3: Toxicological requirements

2281 Flexible cellular polyurethane for seat cushioning and bedding

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Bunk bed—

(a) a set of components that are or can be assembled as beds, one stacked over the other; or

(b) any bed, other than a hospital bed

in which the upper surface of any mattress base is at least 800 mm above the floor surface (see Figure 1).

NOTE: The above definition includes a tall (i.e. at least 800 mm above the floor) one-level bed as well as the upper bed of a conventional double-decker bunk.

3.2 End rail—a lateral component, fastened between a pair of structural uprights.

3.3 Gap—an opening bounded either by solid components of a bunk bed (see A in Figure 2) or by solid components of the bunk bed and a straight imaginary boundary joining solid components in such a manner as to result in a maximum bounded area (see B in Figure 2).

3.4 Guardrail—a component of the bunk bed intended to prevent an occupant from falling off the bed.

3.5 Hazardous sharp edge—an edge which, when tested in accordance with AS 1647.2, cuts 50 percent or more of the tape, along a line of contact of the tape with the edge.

3.6 Hazardous sharp point—a point which, when tested in accordance with AS 1647.2, penetrates to a distance of 0.51 ± 0.02 mm or more into the gauging slot of the sharp point tester.

3.7 Mattress base—the surface on which the mattress is supported.

3.8 Side rail—a longitudinal component, fastened between a pair of structural uprights (e.g. corner posts) by which the mattress base may be supported.

3.9 Structural uprights—components to which other components such as the end and side rails are fastened to form a rigid structure. The structural uprights are intended to support the mass of the bunk bed and its contents (including the occupants).

NOTE: A common type of structural upright is the corner post as shown in Figure 1.

3.10 Tread—the top surface of a step of a ladder.

This is a free preview. Purchase the entire publication at the link below:

AS/NZS 4220 : 1994 : EN : COMBINED PDF

- ⏪ Looking for additional Standards? Visit SAI Global Infostore
- ⏪ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation

Need to speak with a Customer Service Representative - Contact Us