

Australian Standard[®]

Amusement rides and devices

**Part 4.2: Specific requirements—
Contained play facilities**



This Australian Standard® was prepared by Committee ME-051, Amusement Rides and Devices. It was approved on behalf of the Council of Standards Australia on 21 March 2013. This Standard was published on 19 April 2013.

The following are represented on Committee ME-051:

- Australian Amusement Association
 - Australian Amusement Leisure and Recreation Association
 - Consumers Federation of Australia
 - Department of Commerce, Worksafe Division, WA
 - Department of Justice and Attorney General, Qld
 - Department of the Premier and Cabinet, SA
 - Engineers Australia
 - Kidsafe
 - Safety Institute of Australia
 - University of Technology Sydney
 - WorkCover New South Wales
 - WorkSafe Victoria
-

This Standard was issued in draft form for comment as DR AS 3533.4.2.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

Amusement rides and devices

Part 4.2: Specific requirements— Contained play facilities

First published as AS 3533.4.2—2013.

COPYRIGHT

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 390 5

PREFACE

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee ME-051, Amusement Rides and Devices, to complement the general requirements for amusement rides and devices given in AS 3533.1 and AS 3533.2.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard is Part 4.2 of the AS 3533 series designed to cover aspects of safety for amusement rides and devices. Parts 1 and 2 address the general aspects of safety common to all kinds of amusement rides and devices and are intended to be used in conjunction with the specific requirements for the particular type of ride. While some ride-specific requirements have been included in Parts 1 and 2, these are now being progressively moved into individual Standards in a new AS 3533.4 series. Standards in the AS 3533.4 series relate to particular rides or devices and give requirements and guidance tailored to the particular kinds of hazards relevant for that ride or device.

In preparation of this Standard, the Committee took into account the approaches taken by BS 8409, *Soft indoor play areas. Code of practice*, and EN 1176-10, *Playground equipment and surfacing*, Part 10: *Fully enclosed play equipment*.

This Standard makes provisions for those involved in the contained play facility industry to provide safe, yet challenging, contained play facilities. It covers the facility as a whole, because it is the combination of good design, materials and management that creates a safe facility. The Standard specifies requirements that will protect a child from hazards he or she may be unable to foresee when using equipment as intended in contained play facilities.

While other Australian Standards cover equipment commonly found within contained play facilities, including AS 3533.1, AS 3533.2, AS 3533.4.1 and the AS 4685 series, this Standard has been developed to provide requirements and guidelines that specifically suit contained play environments because of the unique aspects of such facilities, notably—

- (a) appropriate supervision;
- (b) operation within a contained space; and
- (c) the required presence of carers.

It should be noted that compliance with this Standard alone does not necessarily ensure that all legal obligations are being fulfilled.

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.

CONTENTS

	<i>Page</i>
FOREWORD.....	5
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	6
1.2 OBJECTIVE.....	6
1.3 APPLICATION.....	6
1.4 REFERENCED DOCUMENTS.....	6
1.5 DEFINITIONS.....	7
SECTION 2 PLANNING AND DEVELOPMENT	
2.1 FACILITY PROFILE.....	11
2.2 REGULATIONS.....	11
SECTION 3 DESIGN	
3.1 GENERAL.....	12
3.2 SAFETY REQUIREMENTS.....	12
3.3 LAYOUT AND INSTALLATION.....	23
3.4 INFORMATION TO BE PROVIDED BY THE MANUFACTURER OR SUPPLIER OF PLAYGROUND EQUIPMENT.....	24
3.5 INFORMATION TO BE PROVIDED BY THE MANUFACTURER OR SUPPLIER OF IMPACT ATTENUATING SURFACING.....	24
3.6 MARKING.....	25
SECTION 4 SPECIFIC PLAY EQUIPMENT REQUIREMENTS	
4.1 GENERAL.....	27
4.2 INFLATABLE DEVICES.....	27
4.3 BALL-POOLS.....	28
4.4 CONTAINED PLAY STRUCTURE.....	29
4.5 OTHER PLAY AREAS.....	33
4.6 TODDLER AREA.....	34
4.7 FORCED MOVEMENT DEVICES.....	34
4.8 MECHANICAL RIDES.....	42
4.9 AIR PLAY DEVICES.....	43
4.10 CLIMBING WALLS.....	43
SECTION 5 OPERATION	
5.1 GENERAL.....	45
5.2 STAFFING AND MONITORING.....	45
5.3 STAFF AND MANAGEMENT TRAINING.....	46
5.4 FACILITY OPERATION.....	46
5.5 EMERGENCY PROVISIONS AND PROCEDURES.....	47
SECTION 6 INSPECTION, MAINTENANCE AND CLEANING	
6.1 GENERAL.....	49
6.2 INSPECTION AND MAINTENANCE.....	49
6.3 SAFETY MANAGEMENT SYSTEM.....	50
6.4 INSPECTION.....	53
6.5 MAINTENANCE.....	53
6.6 CLEANING PROCEDURES.....	54

APPENDICES

A	DETERMINATION OF LOADS.....	55
B	METHODS FOR CALCULATION OF STRUCTURAL INTEGRITY.....	60
C	PHYSICAL TESTING OF STRUCTURAL INTEGRITY.....	64
D	DETERMINATION OF HIC, HIC DURATION, G_{\max} AND j_{\max} VALUES.....	66
E	TEST METHODS FOR ENTRAPMENT.....	70
F	INSPECTION INFORMATION AND SCHEDULES.....	83
G	EXAMPLE CLEANING CHECK LISTS.....	85
H	TEST METHOD FOR BALL-POOL BALLS.....	87
I	GUIDANCE ON CLEANING OF BALL-POOLS.....	89
J	TEST METHOD FOR STRUCTURAL INTEGRITY AND ATTACHMENT PERFORMANCE OF BARRIERS, NETTING AND MESH.....	90

FOREWORD

Children discover and learn about the world in which they live via play, which provides an essential element of children's development and growth.

Contained play facilities are areas designed for children's play, including the site and any equipment. The term does not include sites and equipment intended for use in formal sport and therapy. Generally, contained play facilities are commercial premises and can be free access or paid access. Contained play facilities should provide some supervision but the level may vary from facilities where the children are fully supervised to those where the parent or carer is principally responsible for the child's behaviour and actions. Contained play facilities are not childcare facilities.

The same hazards face a child in a contained play environment whether it is operated by a commercial organization, such as a chain of international centres or a small local family owned business, or by a voluntary group, such as a service group or a parent organization, or by a single individual. The requirements of this Standard therefore apply to all contained play environments.

It is important for the rounded development of children that, through the medium of play, they arrive at an understanding of danger, which provides the basis for assessing safety in a variety of situations. The balance between challenge and safety is an important consideration for all play providers. The best facilities are those that, through careful design, management, inspection, cleaning and maintenance, offer children high quality play experiences without compromising their safety.

Contained play facilities that children find attractive are generally those that present various levels of difficulty and challenge. Children can explore solutions to these challenges and practice their newly acquired abilities in carefully designed settings, where the levels of risk have been assessed and are managed by adopting supervisory or design techniques.

Precautions need to be taken by play providers to reduce the severity of injuries if children make the wrong judgment but the possibility of harm cannot be completely removed. This Standard aims to ensure that play providers develop facilities that children find enjoyable but where the probability of injury has been minimized. This Standard does not purport to address all the hazards associated with contained play facilities.

The Standard's existence alone will not necessarily prevent injuries. Like other physical activities, the use of contained play facilities involves the risk of injury. However, developing and maintaining contained play facilities in accordance with this Standard will help minimize the risk of injury occurring and the severity of any injury that may occur.

STANDARDS AUSTRALIA

Australian Standard

Amusement rides and devices

Part 4.2: Specific requirements—Contained play facilities

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out the minimum safety requirements for the design, development, installation, inspection, maintenance, supervision levels and operation of contained play facilities (see Clause 1.5.9).

This Standard does not apply to sites and equipment intended for use in formal sport and therapy.

This Standard does not apply to licensed childcare facilities.

1.2 OBJECTIVE

The objective of this Standard is to provide requirements and guidance specific to the design, construction, operation and maintenance of contained play facilities that will protect the health and safety of both operating staff and patrons.

1.3 APPLICATION

This Standard is intended to be used in conjunction with AS 3533.1 and AS 3533.2, which provide requirements and recommendations on matters common to all amusement rides and devices. Specific requirements in this Standard take precedence over corresponding requirements in AS 3533.1 and AS 3533.2. Contained play facilities shall be classified as a Class 2 device in accordance with AS 3533.1. If the requirements of any part of this Standard conflict with any National, State or Territory regulations, the appropriate statutory regulations shall apply.

While this Standard has been developed for contained play facilities in commercial premises, it may be used for guidance for similar facilities in educational institutions and hospitals. Additionally, this Standard was not developed to cover use of the facilities by patrons over 12 years of age in a private hire situation but may be used as guidance when conducting a risk assessment for such operations.

1.4 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
2316	Artificial climbing structures and challenge courses
2316.1	Part 1: Fixed and mobile artificial climbing and abseiling walls
2321	Short-link chain for lifting purposes
3533	Amusement rides and devices
3533.1	Part 1: Design and construction
3533.2	Part 2: Operation and maintenance