

Australian Standard[®]

Trampolines—Safety aspects



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The following are represented on Committee CS-100:

- Australian Competition and Consumer Commission
 - Australian Industry Group
 - Australian Retailers Association
 - Australian Toy Association
 - Consumers' Federation of Australia
 - Department of Consumer and Employment Protection (WA)
 - Department of Education and Training (NSW)
 - Engineers of Australia
 - Gymnastics Australia
 - New South Wales Department of Community Services
 - Office of Fair Trading NSW Consumer Protection Agency
 - Plastics and Chemicals Industries Association Incorporated
 - The Children's Hospital Westmead
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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.

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AS 4989—2006
(Incorporating Amendment Nos 1 and 2)

Australian Standard[®]

Trampolines—Safety aspects

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PREFACE

This Standard was prepared by Standards Australia Committee CS-100, Trampolines to supersede AS 4989—2003, *Trampolines*.

This Standard incorporates Amendment No. 1 (February 2008) and Amendment No. 2 (July 2010). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

In the preparation of this Standard cognizance was taken of ASTM F381-04, *Standard Safety Specification for Components, Assembly, Use, and Labelling of Consumer Trampolines*, which was prepared by the American Society for Testing and Materials Committee F08, Sports Equipment and Facilities, Subcommittee F08.17, Trampolines.

The objective of this revision is to remove specifications of trampoline frame design and to concentrate on safety aspects such as padding design, sharp edges and marking and consumer information.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application 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.....	4
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	5
1.2 OBJECTIVE.....	5
1.3 REFERENCED DOCUMENTS	5
1.4 DEFINITIONS	5
SECTION 2 COMPONENTS AND DESIGN	
2.1 COMPONENTS	8
2.2 DESIGN	8
SECTION 3 INFORMATION AND MARKING REQUIREMENTS	
3.1 INFORMATION PACKET	11
3.2 SAFETY INFORMATION.....	11
3.3 INSTALLATION AND MAINTENANCE INSTRUCTIONS.....	12
3.4 PRODUCT MARKING.....	14
3.5 PACKAGING AND PACKAGE MARKING.....	15
APPENDICES	
A ADDITIONAL SAFE USE INSTRUCTIONS.....	16
B SKILLS	17
C TEST METHOD FOR FRAME PADDING AND OTHER SOFT EDGE SYSTEMS	25
D IMPACT GRAPHS—ACCELERATION VERSUS TIME.....	29

FOREWORD

In industrial safety, there is a recognized hierarchy of hazard control measures, based on the principle that hazards should be removed by ‘engineering out’, and that personal protective equipment is a last line of defence. Trampolines present a different situation.

Ideally, a trampoline should encourage development of gross motor skills and also present a stimulating environment which presents trampoline users with manageable challenges, through which users can find and test their limits. In order to provide these challenges, a balance must be found between risk and safety.

This Standard does not purport to address all of the hazards associated with trampolines. The Standard’s existence alone will not necessarily prevent injuries. Like other physical activities, trampoline use involves the risk of injury, particularly if the equipment is used improperly.

Committee CS-100 concluded that the best way to reduce risk of injury to users was to specify minimum acceptable design standards and to include appropriate consumer information requirements. Provision of additional information is strongly recommended.

Committee CS-100 acknowledges that approximately 50% of injuries pertaining to trampolines relate to falls onto surrounding surfaces. The Committee is considering providing provisions on trampoline enclosures and in-ground installations in the future.

Trampoline designers, manufacturers, distributors and retailers must take every possible care to identify and eliminate unacceptable trampoline risks and minimize other hazards associated with trampolines.

STANDARDS AUSTRALIA

Australian Standard Trampolines—Safety aspects

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements for the safety padding system and suspension system for trampolines, product marking, and instructional material to be included with the product, comprising information on assembly, maintenance and the safe use of trampolines. It specifies the minimum requirements for frame padding and provides a method of test by which its impact energy attenuation can be determined.

1.2 OBJECTIVE

The objective of this Standard is to provide manufacturers and suppliers with requirements for the safety padding system and suspension system for trampolines. It also provides requirements for instructional material for assembly, maintenance and safe use of trampolines and specific requirements for areas where impact energy attenuation is necessary.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

- | | |
|--------|---------------------------------------|
| 2512 | Methods of testing protective helmets |
| 2512.1 | Part 1: Definitions and headforms |

AS/NZS ISO

- | | |
|--------|---|
| 8124 | Safety of toys |
| 8124.1 | Part 1: Safety aspects related to mechanical and physical properties (ISO 8124-1:2000, MOD) |

ASTM

- | | |
|------|---|
| G154 | Standard practice for operating fluorescent light apparatus for UV exposure of non-metallic materials |
|------|---|

ISO

- | | |
|------|--|
| 6487 | Road vehicles—Measurement techniques in impact tests—Instrumentation |
|------|--|

1.4 DEFINITIONS

For the purposes of this Standard the definitions below apply.

1.4.1 Acceleration

A vector that specifies the time-derivative (rate of change) of velocity.

1.4.2 Acceleration pulse

A non-oscillatory acceleration of a short duration.

1.4.3 Accelerometer

A transducer (sensor) whose electrical output is proportional to acceleration for a specified axis and frequency range.