

Australian/New Zealand Standard™

**Child restraint systems for use in motor
vehicles**



AS/NZS 1754:2010

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-085, Child Restraints for Use in Motor Vehicles. It was approved on behalf of the Council of Standards Australia on 7 January 2010 and on behalf of the Council of Standards New Zealand on 27 January 2010.
This Standard was published on 24 February 2010.

The following are represented on Committee CS-085:

Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Chamber of Commerce and Industry
Australian Competition and Consumer Commission
Australian Industry Group
Centre for Automotive Safety Research
Certification Interests (Australia)
Consumers Federation of Australia
Department of Infrastructure, Transport, Regional Development and Local Government (Australia)
Engineers Australia
Export New Zealand
Federal Chamber of Automotive Industries
Kidsafe
New Zealand Transport Agency
NSW Health
NSW Office of Fair Trading, Department of Commerce
Roads and Traffic Authority of NSW
Royal New Zealand Plunket Society
Safekids New Zealand

Keeping Standards up-to-date

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 1754.

Australian/New Zealand Standard™

Child restraint systems for use in motor vehicles

Originated as AS E46—1970.
Previous edition AS/NZS 1754:2004.
Seventh edition 2010.
Reissued incorporating Amendment No. 1 (November 2012).

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

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 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-085, Child Restraints for Use in Motor Vehicles, to supersede AS/NZS 1754:2004.

This Standard incorporates Amendment No. 1 (November 2012). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The Standard specifies a range of design and performance requirements for devices to restrain children in motor vehicles to provide protection to the child in the event of a crash. This Standard requires tests to be conducted according to methods contained in the AS/NZS 3629, *Methods of testing child restraints* series.

Major revisions in this edition of AS/NZS 1754 include:

- (a) Introduction of requirements for a new type of booster seat ('Type F'), intended to accommodate children up to 138 cm in height. These restraints are subject to additional requirements for side support to control posture and position.
- (b) Removal of booster cushions from the Standard as they are unable to offer side impact protection.
- (c) Introduction of new requirements, applicable to all booster seats, intended to reduce the likelihood of abdominal injury to children using booster seats.
- (d) Changes to the way in which child restraints are categorized. Child restraints have previously been categorized in terms of the mass of the child intended to use the restraint. Mass-based categories are no longer used in this Standard and have been replaced by approximate age ranges, and restraints now require marking to show the height of the shoulders of a child that fits the restraint.
- (e) Introduction of new requirements for colour-coded marking of the seatbelt path on the child restraint.

For the next revision of this Standard the Committee intends to specify a test method and assessment criteria for the energy attenuating properties required by Clause 3.2.1.

Statements expressed in mandatory terms in notes and footnotes to tables and figures are deemed to be requirements of this Standard.

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>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	5
1.2 OBJECTIVE.....	5
1.3 REFERENCED DOCUMENTS.....	5
1.4 DEFINITIONS.....	6
1.5 TYPE DESIGNATION.....	10
SECTION 2 MATERIALS	
2.1 WEBBING.....	11
2.2 METAL PARTS OR COATED METAL PARTS.....	11
2.3 FLAMMABILITY.....	11
2.4 TOXICITY.....	12
2.5 PLASTICS STABILIZATION.....	12
SECTION 3 DESIGN AND CONSTRUCTION	
3.1 EXTENT OF PROTECTION.....	13
3.2 RESTRAINT SYSTEM.....	13
3.3 SECURING DEVICE.....	33
3.4 QUICK-RELEASE DEVICE.....	33
3.5 ANCHORING AND ATTACHMENT SYSTEM.....	36
3.6 RIGID COMPONENTS.....	43
3.7 ACCESSORIES.....	43
3.8 ADJUSTERS.....	43
3.9 CORROSION PROTECTION OF METAL PARTS.....	43
3.10 DURABILITY OF COMPONENTS.....	43
3.11 WORKMANSHIP AND FINISH.....	44
3.12 CHILD RESTRAINTS DESIGNED FOR CHILDREN WITH DISABILITIES.....	44
SECTION 4 PERFORMANCE	
4.1 GENERAL.....	45
4.2 HAZARDOUS THROAT CONTACT IN ABNORMAL SITUATIONS.....	45
4.3 DYNAMIC PERFORMANCE OF THE CHILD RESTRAINT.....	45
4.4 DYNAMIC PERFORMANCE OF UPPER ANCHORAGE COMPONENTS.....	49
4.5 DYNAMIC PERFORMANCE OF UPPER ANCHORAGE EXTENSION STRAPS.....	49
SECTION 5 TESTING	
5.1 RECLINING CHILD RESTRAINTS.....	51
5.2 TEST DUMMIES.....	51
5.3 CALIBRATION OF TNO TEST DUMMIES.....	51
5.4 CHILD RESTRAINT TEST SPECIMEN.....	51
5.5 REMOVABLE ITEMS.....	52
SECTION 6 INFORMATIVE LABELLING, INSTRUCTIONS, MARKING AND PACKAGING	
6.1 GENERAL LABELLING REQUIREMENTS.....	58
6.2 GENERAL PACKAGING REQUIREMENTS.....	61
6.3 INFORMATION TO BE SUPPLIED ON PACKAGING.....	62
6.4 INFORMATION TO BE SUPPLIED IN AN INSTRUCTION BOOKLET OR SHEET.....	64

6.5	INFORMATION TO BE SUPPLIED ON A SWING TICKET OR LABEL.....	67
6.6	MARKING	67
6.7	SHOULDER HEIGHT MARKING	69
6.8	MARKING ON FABRIC COVERS	70

APPENDICES

A	CLOTHING FOR TEST DUMMIES	78
B	SPACERS FOR ATTACHMENT TO TEST DUMMIES	79
C	INSTRUCTIONS TO BE SUPPLIED FOR INSTALLATION OF THE UPPER ANCHORAGE FITTINGS	80
D	RECOMMENDED DUMMY TYPES	82
E	EXPLANATION OF SHOULDER DESIGNATION.....	83

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Child restraint systems for use in motor vehicles

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for restraining devices for child occupants of passenger cars and their derivatives, such devices being intended, when properly selected, correctly installed and correctly adjusted, to reduce the risk of bodily injury in a vehicle impact. The devices may also have application to other types of vehicles.

NOTE: This Standard does not cover child restraints that are an integrated feature of a motor vehicle.

1.2 OBJECTIVE

The objective of the Standard is to provide minimum design, construction and performance requirements for child restraint systems in order to promote the provision of a high level of protection for children travelling in motor vehicles.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1753 Webbing for restraining devices for occupants of motor vehicles
- 2001 Methods of test for textiles
- 2001.5.4 Method 5.4: Dimensional change—Domestic washing and drying procedures for textile testing (ISO 6330:2000, MOD)
- 2282 Methods for testing flexible cellular polyurethane
- 2282.8 Method 8: Determination of force deflection
- 2331 Methods of test for metallic and related coatings
- 2331.3.1 Method 3.1: Corrosion and related property tests—Neutral salt spray (NSS) test
- 2700 Colour Standards for general purposes
- 2755 Textile fabrics—Burning behaviour
- 2755.2 Method 2: Measurement of flame spread properties of vertically oriented specimens
- 2755.3 Method 3: Determination of surface burning time

AS/NZS

- 2465 Unified hexagon bolts, screws and nuts (UNC and UNF threads)
- 3629 Methods of testing child restraints
- 3629.1 Method 1: Dynamic testing
- 3629.2 Method 2: Determination of hazardous throat contact in abnormal situations
- 3629.3 Method 3: Dynamic testing of upper anchorage components
- 3629.4 Method 4: Determination of the force required to adjust a harness