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Accessories for seat belts used in motor vehicles



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- Consumers Federation of Australia
- Department of Infrastructure, Transport, Regional Development, Communications and the Arts
- Institute of Automotive Mechanical Engineers
- Kidsafe Australia
- Mobility and Accessibility for Children in Australia
- Transport for NSW
- Victorian Automobile Chamber of Commerce

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Preface

This Standard was prepared by the Standards Australia Committee CS-075, Seat Belts for Use in Motor Vehicles.

The objective of this document is to provide minimum requirements for the design, construction, performance and informative labelling for products sold separately as accessories for seat belts in motor vehicles. The requirements provide a framework for testing the safety of accessories to reduce the risk of injury to children and adults.

This document is primarily for accessories that attach to seat belts. However, some of these accessories can also be used in conjunction with the vehicle's child restraint anchorages, including ISOFIX low anchorages and upper anchorages. Further information about these accessories are in [Sections 9](#) and [12](#) of this document.

Where reference is made to a Standard by its number only, the reference applies to the current edition of the document. Where reference is made to a Standard by number, year and where relevant an amendment number, the reference applies to that specific document.

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Introduction

The key principle underpinning this document is that accessories do not compromise the safety of the occupant. Other general principles underpinning this document are as follows:

- (a) Accessories allow rapid release for an occupant in the case of emergency.
- (b) Accessories that could contact the occupant during a crash are designed so that they do not pose a risk of injury to the occupant.
- (c) The design of accessories consider the potential for incorrect use and minimize opportunities for incorrect use. Where this is not possible by design, appropriate warnings are included to advise the user how to use the accessory correctly.
- (d) Accessories conform to appropriate flammability, toxicity and small parts requirements for safe use by occupants.
- (e) To avoid potential misuse, packaging and instructions nominate —
 - (i) the type of seat belts for which the accessories are suitable, such as lap or lap/sash seat belts; or
 - (ii) the type of seat belt retractors, such as emergency locking retractors (ELR) and automatic locking retractors (ALR) models of restraints.
- (f) Accessories designed to restrain pets ensure that pets do not become projectiles in a crash.

The use of accessories for tensioning seatbelts to secure occupants and child restraints is considered unacceptable in Australia.

Australian Standard®

Accessories for seat belts used in motor vehicles

Section 1 Scope and general

1.1 Scope

This document specifies requirements for the design, construction and performance of, and test methods for, accessories to be used with motor vehicle seat belts, for maintaining safe use.

This document is applicable to accessories that are attached to the seat belt and are designed to do the following:

- (a) Modify the seat belt configuration.
- (b) Extend seat belt length.
- (c) Limit an occupant's ability to inappropriately release the seat belt buckle.
- (d) Reduce the risk of occupants inappropriately getting out of their seat.
- (e) Provide support for the occupant's head, torso or limbs.
- (f) Provide comfort for the occupant.
- (g) Assist the occupant to use their seat belt.
- (h) Restrain pets.
- (i) Assist occupants with disability to travel in a vehicle.

This document excludes the following:

- (A) Child restraint systems.
NOTE 1 Child restraint systems are covered in AS/NZS 1754.
- (B) Wheelchair tiedowns and wheelchair occupant restraint systems.
NOTE 2 This is covered in AS/NZS 10542.1.
- (C) Stretcher restraints.
- (D) Supplementary belts.
- (E) Accessories for use by pregnant occupants.
- (F) Accessories to restrain heavy and/or bulky ancillary equipment.
- (G) Electronic warning systems used with buckles.

1.2 Application

Accessories shall conform to the general requirements in [Sections 2, 3, 4](#) and [5](#), and to the specific requirements of the section(s) relevant to the category of accessory. Requirements for specific categories of accessory are set out in [Sections 6](#) to [12](#).

1.3 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2331.3.1, *Methods of tests for metallic and related coatings, Method 3.1: Corrosion and related property tests—Neutral salt spray test (NSS test)*

AS 1753, *Webbing for restraining devices for occupants of motor vehicles*

AS/NZS 1754, *Child restraint systems for use in motor vehicles*

AS 2596, *Seat belt assemblies for motor vehicles (ECE Regulation No. 16, MOD)*

AS/NZS 3629.1, *Methods of testing child restraints, Method 1: Dynamic testing*

AS/NZS 3629.5, *Methods of testing child restraints, Method 5: Determination of quick-release device and low attachment connector actuation force*

AS/NZS 3629.10, *Methods of testing child restraints, Method 10: Bite test*

AS/NZS 62115, *Electric toys — Safety*

AS/NZS ISO 8124-1, *Safety of toys, Part 1: Safety aspects related to mechanical and physical properties*

AS/NZS ISO 8124-3, *Safety of toys, Part 3: Migration of certain elements (ISO 8124-3:2010, MOD)*

United Nations Economic Commission for Europe (UNECE). UN Regulation No 16: 2020 (Rev. 10) Seat belt assemblies for motor vehicles (UNECEr16)

1.4 Terms and definitions

For the purposes of this document, the terms and definitions given in AS/NZS 1754 and those below apply.

1.4.1

accessories

parts that may be added to or used with a seat belt

1.4.2

actuation surface

surface area of a quick-release device that is pressed or pulled to activate the device

1.4.3

adjuster

device that provides the means of adjustment

1.4.4

anchorage components

terminal parts of a seat belt to a vehicle or a vehicle seat

1.4.5

booster seat

device used for raising the child's position in the motor vehicle and adapting a vehicle seat belt to make it suitable for a child, and having a back above the seating plane

1.4.6

can

indicates the possibility or capability of an option

1.4.7**child restraint**

device used in conjunction with a vehicle seat belt or ISOFIX compatible lower attachment connectors to restrain a child passenger of a motor vehicle in the event of a vehicle impact and to minimize the risk of bodily injury

1.4.8**child restraint upper anchorage**

part of the vehicle designed to transfer loads from the upper part of the child restraint to the vehicle structure

[SOURCE: Based on content from the Federal Register of Legislation at 13/12/2006. For the latest information on Australian Government law please go to <https://www.legislation.gov.au/>. Also refer to Vehicle Standard (Australian Design Rule - Definitions and Vehicle Categories) 2005]

1.4.9**coated metal parts**

parts covered with a corrosion protection layer

1.4.10**fabric**

woven, knitted or non-woven textile material, in the form of a single material or multi-component materials

Note 1 to entry: Examples of multi-component materials include coated, quilted and multi-layered sandwich construction, and similar combinations.

1.4.11**ISOFIX low anchorages**

pair of 6 mm diameter rigid round horizontal bars extending from the vehicle which are designed to accept lower attachment connectors fitted to a child restraint

1.4.12**load-bearing part**

part that can experience tensile, compressive or rotational loads during dynamic testing

1.4.13**locking clip**

device that either —

- (a) joins the lap and sash together to convert the seat belt to a lap belt; or
- (b) prevents the seat belt from slipping, loosening or tightening

Note 1 to entry: Some devices are also known as “gated buckles” or “gated three bar slides”.

1.4.14**lower attachment connectors**

pair of connection means extending from the child restraint that engages with ISOFIX low anchorages in a vehicle

Note 1 to entry: The connectors may be either rigid or flexible.

1.4.15**may**

indicates the existence of an option

1.4.16**means of adjustment**

parts by which the restraint is adjusted to suit the wearer or the vehicle, or both

1.4.17**occupant**

person who is either the driver or a passenger, or a pet

1.4.18**occupant with disability**

persons —

- (a) with one or more disabilities (short or long term) and/or medical conditions (short or long term) as identified by a prescriber;
- (b) who exhibit behaviours of concern in a vehicle, that may affect safe transport as identified by a prescriber

1.4.19**older children**

children who are outside of the scope of AS/NZS 1754 and are likely to be over 10 years of age

1.4.20**permanently fixed**

where a component is attached to another component in such a way that it cannot be completely detached without the use of tools

Note 1 to entry: The position of attachment may or may not be able to be adjusted or altered.

1.4.21**prescriber**

person or persons responsible for assessing an individual's needs and who prescribes the way in which the individual should be transported in a motor vehicle

Note 1 to entry: For example, occupational therapist, physiotherapist, medical practitioner, rehabilitation engineer.

1.4.22**rigid component**

any component or material that is stiffer than webbing, fabric, padding, comfort foam and structures that significantly flex or hinge when a force of 50 N is applied

1.4.23**roping**

twisting, crushing or curling of the webbing that appreciably reduces the area of the webbing in contact with the wearer

1.4.24**seat belt tensioner**

any device that tensions the seat belt using part of the seat belt to obtain a firmer fit on the occupant or to a child restraint

1.4.25**shall**

indicates that a statement is mandatory

1.4.26**should**

indicates a recommendation

1.4.27**strap**

flexible component that restrains the occupant and transmits the restraining forces to the seatbelt or the vehicle

1.4.28**test mass**

mass that represents the applicable test dummy or simulated pet dummy

1.4.29**Type H**

device that modifies the positioning of the sash belt on an occupant

Note 1 to entry: Device can be used with a booster seat suitable for children approximately 4 to 10 years of age and/or used with a seat belt without a booster seat for children approximately 7 to 10 years of age, as per AS/NZS 1754, or by older age children or adults.

Section 2 General materials

2.1 General

This section specifies general requirements for materials used in the design, construction and performance of accessories. Additional requirements specific to the category of accessory may apply, see [Sections 6 to 12](#).

2.2 Staining

Accessories in contact with the vehicle occupants or vehicle interior shall not cause staining nor discolouration of clothing or vehicle trims.

2.3 Metal parts or coated metal parts

Metal parts or coated metal parts, when exposed for not less than 50 h to salt spray in accordance with AS 2331.3.1, shall —

- (a) not show base metal corrosion extending more than 3 mm from an edge or from a line scribed through the coating;
- (b) not show blistering of the coating; and
- (c) be operational.

Any load-bearing heat-treated ferrous metal part that has been electroplated shall be treated to remove hydrogen embrittlement. The treatment to minimize the risk of hydrogen embrittlement shall follow the procedures of a standard developed for this purpose. Testing may be performed on individual components or on assemblies.

2.4 Toxicity

Any part or material that can be mouthed or sucked by an occupant shall conform to the requirements of AS/NZS ISO 8124.3. For the purpose of this clause, where the word “toy” appears in AS/NZS ISO 8124.3, the word “accessory” shall be substituted.

NOTE Mouthed or sucked parts or materials include seat covers, seat padding, shoulder pads, harness webbing, seat chair material and other accessories.

2.5 Bite resistance of fabric items

Fabric items that are accessible to an occupant's mouth when normally restrained shall be resistant to chewing. These fabric items shall be tested in accordance with AS/NZS 3629.10. Material pieces larger than 25 mm² in size shall not separate from the accessory.

2.6 Flammability

Fabrics used in the construction of the accessory that have a total area greater than 40 000 mm² or any plastic part weighing more than 200 g shall meet the flammability requirements of AS/NZS 1754.

2.7 Plastics stabilization

Plastics used in accessories should be designed to achieve a useable life of at least 10 years when used in accordance with the product instructions.

Plastics used in main load-bearing mouldings shall be stabilized against UV and thermal degradation. Thermally stabilized plastics shall resist degrading when subject to the moulding process and the temperature changes normally encountered in vehicles.