

AS 1753:2022



STANDARDS
Australia



Webbing for restraining devices for occupants of motor vehicles



AS 1753:2022

This Australian Standard ® was prepared by CS-075, Seat Belts for Use in Motor Vehicles. It was approved on behalf of the Council of Standards Australia on 18 September 2022.

This Standard was published on 30 September 2022.

The following are represented on Committee CS-075:

- Association of Accredited Certification Bodies
- Australasian New Car Assessment Program
- Australian Automotive Aftermarket Association
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Road Research Board (ARRB)
- Austroads
- Consumers Federation of Australia
- Department of Infrastructure, Transport, Regional Development and Communications
- Federal Chamber of Automotive Industries
- Institute of Automotive Mechanical Engineers
- Kidsafe Australia
- Mobility and Accessibility for Children in Australia
- Transport for NSW
- Truck Industry Council
- Victorian Automotive Chamber of Commerce

This Standard was issued in draft form for comment as DR AS 1753:2022.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

ISBN 978 1 76113 213 1

Webbing for restraining devices for occupants of motor vehicles

Originated in Australia as AS E47—1968.
Originated in New Zealand as NZS 5432:1985.
Jointly revised, amalgamated and redesignated as AS/NZS 1753:2015.
Revised and redesignated as AS 1753:2022.

© Standards Australia Limited 2022

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 (Cth).

Preface

This Standard was prepared by the Standards Australia Committee CS-075, Seat Belts for Use in Motor Vehicles, to supersede AS/NZS 1753:2015.

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

The objective of this document is to provide manufacturers with requirements for webbing intended for restraining devices for occupants of motor vehicles.

As part of this revision, an alternative light source has been added to [Appendix C](#) to provide options for manufacturers. The alternative use of a Xenon light source aligns with the optional requirements of AS 2596.

The terms “normative” and “informative” are used in Standards to define the application of the appendices 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

Preface	ii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification and designation	2
5 Manufacturing requirements	2
6 Performance requirements	2
6.1 Width	2
6.2 Dry breaking force	3
6.3 Width change under force	3
6.4 Wet breaking force of webbing made from other types of fibre	3
6.5 Elongation and hysteresis	3
6.6 Colourfastness to rubbing	3
6.7 Colourfastness to perspiration	3
6.8 Colourfastness to light	3
6.9 Resistance to light degradation	3
6.10 Resistance to abrasion	4
7 Specimens for testing	4
Appendix A (normative) Determination of dry breaking force, width change under force, and wet breaking force	5
Appendix B (normative) Determination of elongation and hysteresis	8
Appendix C (normative) Determination of resistance to light	12
Appendix D (normative) Determination of resistance to abrasion (hexbar test)	14
Bibliography	17

NOTES

Australian Standard®

Webbing for restraining devices for occupants of motor vehicles

1 Scope

This document specifies requirements for the manufacturing, performance and marking of webbing for restraining devices for occupants of motor vehicles.

NOTE There may be appropriate applications for this webbing other than for occupants of motor vehicles. Additional requirements for such applications may apply.

2 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 2001.1, *Methods of test for textiles, Part 1: Conditioning procedures*

AS 2001.4.A02, *Methods of test for textiles, Method 4.A02: Colourfastness tests—Grey scale for assessing change in colour*

AS 2001.4.A03, *Methods of test for textiles, Method 4.A03: Colourfastness tests—Grey scale for assessing staining*

AS 2001.4.B01, *Methods of test for textiles, Method 4.B01: Colourfastness tests—Determination of colourfastness to daylight of textile materials*

AS 2001.4.B02, *Methods of test for textiles, Method 4.B02: Colourfastness tests—Colourfastness to artificial light: Xenon arc fading lamp test*

AS 2001.4.E04, *Methods of test for textiles, Method 4.E04: Colourfastness tests—Determination of colourfastness to perspiration*

AS 2001.4.3, *Methods of test for textiles, Method 4.3: Colourfastness tests—Determination of colourfastness to rubbing*

AS 2193, *Calibration and classification of force-measuring systems*

ISO 105-B01, *Textiles — Tests for colour fastness — Part B01: Colour fastness to light: Daylight*

US Federal Test Method Standard 191A, *Textile test methods, Method 5660, Colorfastness to light of textile materials; accelerated method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

elongation

increase in length (extension) of the material expressed as a percentage of the original length

3.2

hysteresis

loss of elasticity when the webbing is stretched and then allowed to recover its original length when the load is removed

3.3

shall

indicates that a statement is mandatory

3.4

should

indicates a recommendation

3.5

webbing

component of woven construction which has properties to attenuate deceleration forces

4 Classification and designation

Webbing shall be classified according to width as follows:

- (a) $\geq 19 \text{ mm} < 23 \text{ mm}$ — Designator A.
- (b) $\geq 23 \text{ mm} < 34 \text{ mm}$ — Designator B.
- (c) $\geq 34 \text{ mm} < 46 \text{ mm}$ — Designator C.
- (d) $\geq 46 \text{ mm} < 76 \text{ mm}$ — Designator D.

Webbing shall be classified according to minimum dry breaking force as follows:

- (i) $\geq 3 \text{ kN}$ — Designator 3.
- (ii) $\geq 7 \text{ kN}$ — Designator 7.
- (iii) $\geq 11 \text{ kN}$ — Designator 11.
- (iv) $\geq 13 \text{ kN}$ — Designator 13.
- (v) $\geq 16 \text{ kN}$ — Designator 16.
- (vi) $\geq 22 \text{ kN}$ — Designator 22.

EXAMPLE Webbing having a width of 36 mm and a minimum dry breaking force of 8 kN is designated Class C7. Such webbing could also be used in applications specifying Class C3.

5 Manufacturing requirements

Webbing shall be manufactured from high tenacity polyester fibre. All threads shall be lock-joined or otherwise secured in the weave. Where the weave is produced on a shuttleless loom, a locking thread shall be incorporated on the knitted edge. Woven webbing shall be dyed using a high temperature dying process to achieve the performance requirements of [Clause 6](#).

Dope-dyed fibre shall not be used for webbing manufactured to this document.

NOTE The suitability of high temperature dyed polyester webbing has been established for Australian conditions over many years of use.

6 Performance requirements

6.1 Width

When determined by laying the webbing without tension on a flat smooth surface, the maximum and minimum width of the webbing measured to the nearest millimetre shall be within the range appropriate to the class of the webbing (see [Clause 4](#)).