

Australian Standard<sup>®</sup>

---

**Fibre ropes**

**Part 2: Three-strand hawser-laid  
and eight-strand plaited**

---

This Australian Standard was prepared by Committee TX/4, Ropes and Cordage. It was approved on behalf of the Council of Standards Australia on 9 August 1993 and published on 22 November 1993.

---

The following interests are represented on Committee TX/4:

Australian Chamber of Commerce and Industry  
Australian Chamber of Manufactures  
Australian Lightweight Vertical Rescue Instructors  
Australian Maritime Safety Authority  
Department of Defence  
Emergency Management Australia  
New South Wales Fire Brigades  
Police Department, N.S.W.  
South Australian State Emergency Service  
State Emergency Service N.S.W.  
Textile Clothing and Footwear Council of Australia

---

**Review of Australian Standards.** To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important, therefore, that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

---

*This Standard was issued in draft form for comment as DR 90139.*

# Australian Standard<sup>®</sup>

---

## Fibre ropes

### Part 2: Three-strand hawser-laid and eight-strand plaited

---

First published as part of AS (E)L507—1941.  
AS (E)L508 first published 1941.  
AS (E)L507—1941 and AS (E)L508—1941 revised,  
amalgamated and redesignated in part as  
AS L18—1963.  
Second edition 1971.  
AS L56 first published 1971.  
AS L57 first published 1971.  
AS L18—1971, AS L56—1971 and AS L57—1971  
revised, amalgamated and redesignated in part as  
AS 1504—1974.  
AS 1752 first published 1975.  
Second edition 1983.  
Second edition AS 1504—1983.  
AS 1504—1983 and AS 1752—1983 revised,  
amalgamated and redesignated in part as  
AS 4142.2—1993.

Incorporating:  
Amdt 1—1996

## PREFACE

This Standard was prepared by the Standards Australia Committee on Ropes and Cordage to supersede AS 1504—1983, *Fibre rope—Three-strand, hawser-laid* and AS 1752—1983, *Fibre rope—Eight-strand plaited*.

For fibre types for which an ISO Standard exists, the technical content of this Standard is equivalent. In addition, this Standard covers vinyl ropes, requires the diameter of three-strand hawser-laid rope to be within certain tolerances of the nominal figures and requires ropes of natural fibre to contain fungicide.

In the preparation of this Standard cognizance has been taken of the following Standards

AS

1380 *Fibre-rope slings (of natural or synthetic rope)*

ISO

1140 *Ropes—Polyamide—Specification*

1141 *Ropes—Polyester—Specification*

1181 *Ropes—Manila and sisal—Specification*

1346 *Ropes—Polypropylene—Specification*

1969 *Ropes—Polyethylene—Specification*

2307 *Ropes—Determination of certain physical and mechanical properties*

9554 *Fibre ropes—General specification*

BS

4128 *Recommendation for the selection, use and care of man-made fibre ropes in marine applications* (now withdrawn)

This Standard is part of a series on fibre ropes. Others in the series include—

- (a) AS 4142.1, *Fibre ropes, Part 1: Code and safe usage*;
- (b) AS 4142.3, *Fibre ropes, Part 3: Man-made fibre rope for static life rescue lines*; and
- (c) AS 4143, *Methods of test for fibre ropes*.

The term 'informative' has been used in this Standard to define the application of the appendices. An 'informative' appendix is only for information and guidance.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

## CONTENTS

	<i>Page</i>
1 SCOPE .....	4
2 REFERENCED DOCUMENTS .....	4
3 DEFINITIONS .....	5
4 NOTATIONS .....	6
5 DESIGNATION .....	6
6 CLASSIFICATION .....	6
7 CONSTRUCTION .....	6
8 DYEING AND FINISHING .....	7
9 DIMENSIONS .....	7
10 BREAKING FORCE .....	7
11 MARKING .....	7
12 PACKAGING .....	9
 APPENDICES	
A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD ..	17
B EQUIVALENT DEADWEIGHT BREAKING LOADS FOR THREE-STRAND HAWSER-LAID AND EIGHT-STRAND PLAITED ROPES .....	19

## STANDARDS AUSTRALIA

**Australian Standard****Fibre ropes****Part 2: Three-strand hawser-laid and eight-strand plaited**

**1 SCOPE** This Standard specifies manufacturing and performance requirements for three-strand hawser-laid and eight-strand plaited rope made from natural or man-made textile staple fibre, monofilament or multifilament yarn. Ropes made from the various natural and man-made textiles listed in Clause 6 are covered by this Standard.

**NOTES:**

- 1 Some hard-laid rope or rope manufactured for special requirements may not be able to meet all the requirements in this Standard.
- 2 Advisory information on alternative methods of determining compliance of a lot with this Standard is given in Appendix A.
- 3 Equivalent deadweight breaking loads are given in Appendix B.

**2 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

**AS**

- |            |  |
|------------|--|
| 1157       | Methods of testing materials for resistance to fungal growth                                       |
| 1157.3     | Part 3: Resistance of cordage and yarns to fungal growth   |
| 1199       | Sampling procedures and tables for inspection by attributes  |
| 1380       | Fibre rope slings (of natural or synthetic rope)   |
| 1399       | Guidance to AS 1199—Sampling procedures and tables for inspection by attributes                    |
| 2450       | Textiles—Natural and man-made fibres—Generic names   |
| 3900       | Quality management and quality assurance standards   |
| 3900.1     | Part 1: Guidelines for selection and use   |
| 3904       | Quality management and quality system elements   |
| 3904.1     | Part 1: Guidelines   |
| 4142       | Fibre ropes  |
| 4142.1     | Part 1: Care and safe usage  |
| 4143       | Methods of test for fibre ropes  |
| 4143.      | Method 1: Dimensions, linear density, breaking force and elongation                                |
| SA         |  |
| SB 8       | Guidelines for third-party certification and accreditation   |
| IEC 18.44  | Guide 44—General rules for ISO or IEC international third-party certification schemes for products |
| <b>ISO</b> |  |
| 9554       | Fibre ropes—General specification  |