

Australian Standard™

**Timber—Heavy Structural Products—
Visually graded**

Part 3: Piles



This Australian Standard was prepared by Committee TM-003, Timber Grading. It was approved on behalf of the Council of Standards Australia on 31 August 2001 and published on 25 October 2001.

The following interests are represented on Committee TM-003:

Australian Timber Importers Association
CSIRO—Building, Construction and Engineering
Curtin University of Technology
Forest and Forest Products Employment Skills
Housing Industry Association
Master Builders Australia
New Zealand Forest Research Institute
New Zealand Timber Industry Federation
New Zealand Timber Suppliers Group
Plantation Timber Association of Australia
Queensland Forestry Research Institute
State Forests of New South Wales
Timber Promotion Council
Timber Research & Development Advisory Council
University of Technology, Sydney

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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

Australian Standard™

**Timber—Heavy Structural Products—
Visually graded**

Part 3: Piles

Originated as Int 365—1952.
Revised and redesignated as AS 3818.3—2001.

COPYRIGHT

© Standards Australia International

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.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 4127 4

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-003, Timber Grading, to supersede SAA INT 365—1952 *Piles (Eastern Australian Hardwoods)*, reinstated 1985.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this Standard is to provide producers and users of piles with requirements for the visual grading and selection of species for timbers intended for use as piling in marine applications (salt or brackish water) or in other than marine applications (land or freshwater).

Appendices have been included to give advice on—

- (a) information required for purchasing orders;
- (b) treatment levels;
- (c) visual ratings for end splits and barrel checks;
- (d) design properties; and
- (e) choice of species.

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.....	4
1.2 APPLICATION	4
1.3 REFERENCE DOCUMENTS	4
1.4 DEFINITIONS.....	5
1.5 MEASUREMENTS	5
1.6 TIMBER SPECIES	5
1.7 SIZE AND FORM OF PILE	6
 SECTION 2 HARDWOOD PILES INTENDED FOR USE AFTER FULL-LENGTH PRESERVATIVE TREATMENT	
2.1 GRADE DESCRIPTIONS	7
2.2 UNSEASONED PILES.....	7
2.3 SEASONED PILES (25 percent moisture content, outer annulus, see Clause 1.4)	8
 SECTION 3 HARDWOOD PILES INTENDED FOR USE WITHOUT FULL-LENGTH PRESERVATIVE TREATMENT	
3.1 GRADE DESCRIPTIONS	9
3.2 UNSEASONED PILES.....	9
3.3 SEASONED PILES (25 percent moisture content, outer annulus, see Clause 1.4)	10
 SECTION 4 SOFTWOOD PILES INTENDED FOR USE AFTER FULL-LENGTH PRESERVATIVE TREATMENT	
4.1 GRADE DESCRIPTIONS	11
4.2 UNSEASONED PILES.....	11
4.3 SEASONED PILES (25 percent moisture content, outer annulus, see Clause 1.4)	12
 APPENDICES	
A GUIDANCE FOR PURCHASERS	13
B APPROPRIATE PRESERVATIVE TREATMENT LEVELS FOR PILES	14
C LIST OF SPECIES AND PROPERTIES	15
D DESIGN PROPERTIES.....	20
E NUMERICAL RATINGS FOR END SPLITS AND BARREL CHECKS	21

STANDARDS AUSTRALIA

Australian Standard

Timber—Heavy Structural Products—Visually graded

Part 3: Piles

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out the minimum requirements for visually graded timber piles.

NOTES:

- 1 Purchasing guidelines are given in Appendix A.
- 2 Information on preservation is given in Appendix B.
- 3 Information on choice of pile species is given in Appendix C.

1.2 APPLICATION

The specification for hardwood piles or softwood piles shall consist of the general provisions given in AS 3818.1 together with the relevant grade description given in this Standard. A list of species and strength groups for piles is given in Appendix C. The stress grades applicable to the strength groups are given in Appendix D.

The design requirements for piling are given in AS 2159 and the timber properties in general are given in AS 1720.1.

Appendix B gives information on factors that effect choice of species, durability and the necessity for treatment (e.g. whether driving into soil, freshwater or saltwater).

1.3 REFERENCE DOCUMENTS

The following documents are referred to in this Standard:

AS

- | | |
|--------|--|
| 1604 | Timber—Preservative-treated—Sawn and round |
| 1720 | Timber structures |
| 1720.1 | Part 1: Design methods |
| 1720.2 | Part 2: Timber properties |
| 2159 | Piling—Design and installation |
| 3818 | Timber—Heavy structural products—Visually graded |
| 3818.1 | Part 1: General requirements |

AS/NZS

- | | |
|--------|--|
| 1080 | Timber —Methods of test |
| 1080.1 | Method 1: Moisture content |
| 1148 | Timber—Nomenclature—Australian, New Zealand and imported species |
| 2878 | Timber—Classification into strength groups |