

Australian Standard™

**Timber—Softwood—Visually graded for
structural purposes**



S t a n d a r d s Australia

This Australian Standard was prepared by Committee TM-003, Timber Grading. It was approved on behalf of the Council of Standards Australia on 15 September 2000 and published on 12 January 2001.

The following interests are represented on Committee TM-003:

Australian Timber Importers Federation
CSIRO, Division of Building Construction and Engineering
Curtin University
Forest and Forest Products Employment Skills Company
Forestry Queensland
Housing Industry Association, Australia
Master Builders Australia
New Zealand Forest Research Institute
New Zealand Timber Industry Federation
New Zealand Timber Suppliers Group
Pine Australia
Queensland Forest Research Institute
State Forests of N.S.W.
Timber Promotion Council
Timber Research and Development Advisory Council of Queensland
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 Standards may also be withdrawn.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—Softwood—Visually graded for
structural purposes**

Originated as part of AS (E)O54—1942, AS Int 376—1958,
AS O95—1964 and AS O107—1969.
Previous edition AS 2858—1986.
Second edition 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 3627 0

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM/3, Timber Grading, to supersede AS 2858—1986.

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 timber manufacturers, suppliers and users with requirements for visual stress grading of sawn softwood that is intended for structural purposes.

Stress grades for cypress and hoop have been determined from tests on full size scantlings. This has resulted in the separate grade descriptions for those species given in Sections 3 and 4.

Changes for slash pine are based on in-grade testing on full size scantlings. Seasoned softwood species have been limited generally by reducing the higher F-ratings by one grade on the basis of the general knowledge developed through in-grade testing programs.

Statements expressed in mandatory terms in Notes to Tables 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 | 4 |
| 1.2 APPLICATION | 4 |
| 1.3 REFERENCED DOCUMENTS | 4 |
| 1.4 TIMBER SPECIES AND STRESS GRADES | 5 |
| 1.5 GRADES | 5 |
| 1.6 DEFINITIONS | 6 |
| 1.7 SIZES AND TOLERANCES | 9 |
| 1.8 MOISTURE CONTENT OF SEASONED TIMBER | 10 |
| 1.9 CHARACTERISTICS | 10 |
| 1.10 GRADE LIMITATION AND GRADING | 12 |
| 1.11 PRESERVATIVE TREATMENT | 13 |
| 1.12 MARKING | 13 |
| SECTION 2 GRADE DESCRIPTIONS (EXCLUDING CYPRESS AND HOOP) | |
| 2.1 STRUCTURAL GRADE No. 1 | 15 |
| 2.2 STRUCTURAL GRADE No. 2 | 16 |
| 2.3 STRUCTURAL GRADE No. 3 | 17 |
| 2.4 STRUCTURAL GRADE No. 4 | 18 |
| 2.5 STRUCTURAL GRADE No. 5 | 20 |
| 2.6 COREWOOD STUD GRADE (Seasoned pinus species only) | 21 |
| 2.7 STRUCTURAL APPEARANCE GRADES | 23 |
| SECTION 3 GRADE DESCRIPTIONS FOR CYPRESS | |
| 3.1 GENERAL | 24 |
| 3.2 STRESS GRADE F7 | 24 |
| 3.3 STRESS GRADE F5 | 25 |
| 3.4 STRESS GRADE F4 | 26 |
| 3.5 STRUCTURAL APPEARANCE GRADES | 28 |
| SECTION 4 GRADE DESCRIPTIONS FOR HOOP | |
| 4.1 GENERAL | 29 |
| 4.2 STRESS GRADE F8 | 29 |
| 4.3 STRESS GRADE F7 | 30 |
| 4.4 STRESS GRADE F5 | 31 |
| 4.5 STRUCTURAL APPEARANCE GRADES | 32 |
| APPENDICES | |
| A STRESS GRADES, STRENGTH GROUPS AND PROPERTIES OF SOFTWOODS | 33 |
| B STRENGTH GROUPS, STRUCTURAL GRADES AND STRESS GRADES OF TIMBER | 38 |
| C MEASUREMENT OF CHARACTERISTICS | 40 |
| D SUMMARY TABLE OF GRADE DESCRIPTIONS (EXCLUDING CYPRESS AND HOOP) | 57 |
| E SUMMARY TABLE OF GRADE DESCRIPTIONS FOR CYPRESS | 59 |
| F SUMMARY TABLE OF GRADE DESCRIPTIONS FOR HOOP | 61 |

STANDARDS AUSTRALIA

Australian Standard**Timber—Softwood—Visually graded for structural purposes**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for visually stress-graded sawn softwood intended for structural purposes.

This Standard does not apply to timber species with an average density at 12 percent moisture content below 360 kg/m³.

NOTES:

- 1 The coverage of softwood species or species mixtures listed in this Standard does not imply their availability or the availability of any particular grade of any species or species mixture.
- 2 This Standard may be used as a basis for certification of conformity under a product certification program.

1.2 APPLICATION

The specification of timber graded to this Standard shall consist of the requirements of this Section, together with the relevant grade description given in Section 2, 3 or 4, as appropriate.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

| | |
|----------|---|
| 1080 | Timber—Methods of test |
| 1080.1 | Part 1: Moisture content |
| 1080.2.1 | Method 2.1: Slope of grain by scribe |
| 1080.2.2 | Method 2.2: Slope of grain by reference to surface checks |
| 1080.2.3 | Method 2.3: Slope of grain by splintering |
| 1148 | Nomenclature of commercial timbers imported into Australia |
| 1604 | Timber preservative treated sawn and round |
| 1684 | National Timber Framing Code |
| 1720 | Timber structures (known as the SAA Timber Structures Code) |
| 1720.1 | Part 1: Design methods |
| 2543 | Nomenclature of Australian timbers |
| 2878 | Timber—Classification into strength groups |
| 4063 | Timber—Stress-graded—In grade strength and stiffness evaluation |

AS/NZS

| | |
|------|--|
| 4491 | Timber—Glossary of terms in timber-related Standards |
|------|--|