AS/NZS 4063.2:2010
(Incorporating Amendment No. 1)

AS/NZS 4063.2:2010

Australian/New Zealand Standard™

Characterization of structural timber

Part 2: Determination of characteristic values

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TM-001, Timber Structures. It was approved on behalf of the Council of Standards Australia on 29 October 2009 and on behalf of the Council of Standards New Zealand on 30 October 2009.
This Standard was published on 23 June 2010.

The following are represented on Committee TM-001:

A3P
Association of Consulting Engineers Australia
Australian Building Codes Board
Australian Timber Importers Federation
Australian Wood Panels Association
Building Research Association of New Zealand
CSIRO Manufacturing and Infrastructure Technology
Curtin University of Technology
Engineers Australia
Master Builders Australia
Monash University
New Zealand Forest Industries Council
New Zealand Timber Industry Federation
Plywood Association of Australasia
Scion
Timber Queensland
University of Canterbury New Zealand
University of Technology, Sydney

Additional Interests:

Mr Bruce Hutchings

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 Standards may also be withdrawn.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 joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 08192.

AS/NZS 4063.2:2010
(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

Characterization of structural timber

Part 2: Determination of characteristic values

Originated as AS/NZS 4063:1992.
Revised, in part, and redesignated as AS/NZS 4063.2:2010.
Reissued incorporating Amendment No. 1 (April 2011).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140

ISBN 978 0 7337 9428 5

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee TM-001, Timber Structures, to supersede (in part) AS/NZS 4063:1992, *Timber—Structural—products—Strength and stiffness evaluation*.

This Standard incorporates Amendment No. 1 (April 2011). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide requirements for the sampling, statistical evaluation of test data and the determination of design characteristic values for structural timber for structural design in accordance with the relevant Australian or New Zealand timber engineering design standard. The test data used for the statistical evaluation is to be derived from testing in accordance with the test methods specified in AS/NZS 4063.1.

AS/NZS 4063:1992 provided an introduction to the philosophy of in-grade testing and evaluation. This revision includes knowledge gained from 16 years of experience in application of the Standard, and covers a period of transition from working stress design (WSD) to limit states design (LSD). During that period, the shortcomings in some test methodologies and the use of normalization to derive limit states design values become apparent and created the need for the significant reform apparent in the AS/NZS 4063 series. The AS/NZS 4063 series, *Characterization of structural timber*, comprises the following parts:

AS/NZS
4063 Characterization of structural timber
4063.1 Part 1: Test methods
4063.2 Part 2: Determination of characteristic values (this Standard)

In this revision, normalization—a device used in the conversion from WSD to LSD format to replace the effect of load factors and the material capacity factor in limit states design with the safety factor used for working stress design—has been discontinued. Henceforth, design characteristic strength values, determined in accordance with this Standard, are to closely approximate the material strength at the 5th percentile level. This change also ensures that this Standard is entirely material related. Matters relating to design and any effect of revisions to design Standards do not impinge on this Standard.

Other significant changes include the following:

(a) Increased emphasis on the significance of definition of the reference population and the need for sampling to be representative.

(b) The inclusion of a variety of statistical methods and, in an informative appendix, a suite of worked examples illustrating the application of each method.

(c) Clear enunciation of guidelines for the determination of design characteristic values based on the characteristic values obtained from the sample testing and evaluation.

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

Page

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Characterization of structural timber

Part 2: Determination of characteristic values

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out procedures and requirements for the evaluation of characteristic values of structural properties from test data, the determination of design characteristic values and the assignment of stress grade properties for stress-graded timber.

In addition to the requirements for stress graded timber, requirements for the determination of design characteristic values for round timber, glue-laminated timber, structural plywood and structural laminated veneer lumber, are also given in Section 4.

1.2 APPLICATION

The design characteristic values or stress grade, determined for structural timber in accordance with this Standard, are intended to be used for structural design in accordance with AS 1720.1.

1.3 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

AS
1720 Timber structures
1720.1 Part 1: Design methods

2082 Timber—Hardwood—Visually stress-graded for structural purposes

2858 Timber—Softwood—Visually stress-graded for structural purposes

3519 Timber—Machine proof grading

3818 Timber—Heavy structural products—Visually graded
3818.11 Part 11: Utility poles

AS/NZS
1328 Glued laminated structural timber
1328.1 Part 1: Performance requirements and minimum production requirements

1748 Timber—Mechanically stress-graded for structural purposes

2269 Plywood—Structural (all Parts)

4063 Characterization of structural timber
4063.1 Part 1: Test methods

4357 Structural laminated veneer lumber (LVL) (all Parts)

NZS
3603 Timber Structures Standard