AS/NZS 2269.2:2007

Australian/New Zealand Standard™

Plywood—Structural

Part 2: Determination of structural properties—Evaluation methods

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TM-008, Plywood Timber Products. It was approved on behalf of the Council of Standards Australia on 19 March 2007 and on behalf of the Council of Standards New Zealand on 16 March 2007.
This Standard was published on 25 May 2007.

The following are represented on Committee TM-008:

Australian Building Codes Board
Engineered Wood Products Association of Australasia
Engineers Australia
Forests NSW
New Zealand Plywood Manufacturers Association
Scion
Timber Development Association (NSW)

Additional Interests:

Mr Kevin Lyngcoln

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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 Standards may also be withdrawn.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.

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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 06604.

Australian/New Zealand Standard™

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Part 2: Determination of structural properties—Evaluation methods

First published as AS/NZS 2269.2:2007

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 8244 2

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-008, Plywood Timber Products, in conjunction with TM-001, Timber Structures.

The Standard is based on EN 1058, *Wood-based panels—Determination of characteristic values of mechanical properties and density*, and prEN 14358, *Timber structures—Fasteners and wood-based products—Calculation of characteristics 5 percentile value and acceptance criteria for a sample*, and assumes test results that are logarithmically normally distributed.

The objective of this Standard is to provide evaluation methods for the determination of structural properties of plywood, which will replace the methods used in the past specified for sawn timber in AS/NZS 4063, *Timber—Stress-graded—In-grade strength and stiffness evaluation*.

This Standard is Part 2 of the AS/NZS 2269 series, *plywood—Structural*, which will comprise the following when completed:

AS/NZS
2269 Plywood—Structural
2269.2 Part 2: Determination of structural properties—Evaluation methods

Part 0: Specifications (Revision of AS/NZS 2269:2004, in preparation)
Part 1: Determination of structural properties—Test methods (Revision of AS/NZS 2098.9:1995, in preparation)

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

CONTENTS

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Plywood—Structural

Part 2: Determination of structural properties—Evaluation methods

1 SCOPE

This Standard specifies a parametric method of calculation based on lognormal distribution for determining the mean and 5th percentile values for structural plywood from test results generated in accordance with AS/NZS 2269.1. Non-parametric methods may also be used.

NOTE: This Standard does not provide design values. In the case of Australia and New Zealand, the values obtained in this Standard should be processed in accordance with AS/NZS 4063 for characteristic properties and AS 1720.1 or NZS 3603 for design values.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS
1720 Timber structures
1720.1 Part 1: Design methods

4063 Timber—Stress-graded—In grade strength and stiffness evaluation

2269 Plywood—Structural
2269.1 Part 1: Determination of structural properties—Test methods

NZS
3603 Timber Structures Standard

3 DEFINITIONS

For the purpose of this Standard the definitions in AS/NZS 4063 apply.

4 NOTATION

The symbols used in this Standard are as follows:

k_s = confidence coefficient for estimating 5th percentile values with 75% confidence (see Table 1)

$m_{05[75]}$ = 5th percentile value estimated with 75% confidence

$m_1, m_{2, \ldots,} m_n$ = test values

m_i = test value in the range from 1 to n

$\overline{m}$ = mean value for the test values $m_1, m_2, \ldots, m_n$

n = number of test values

S_y = logarithmic standard deviation of test data

V = coefficient of variation of test data

$\bar{y}$ = logarithmic mean of test data