AS/NZS 2269.0:2008

Australian/New Zealand Standard™

Plywood—Structural

Part 0: Specifications

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

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-008, Plywood Timber Products, to supersede AS/NZS 2269:2004, *Plywood—Structural*.

The objective of this Standard is to provide minimum performance requirements and specifications for the manufacture and application of structural plywood, acceptable to users, specifiers, manufacturers, and building authorities in Australia and New Zealand.

Plywood manufactured to this Standard is suitable for use in permanent structures. The plywood may be of either hardwood or softwood veneers, or a combination of both. The quality of veneers is judged in the finished panel.

The objective of this revision is to strengthen some sections of the 2004 version that have been subject to misinterpretation. It is intended that by strengthening these sections of the Standard, particularly those dealing with the application of F-grades or characteristic structural properties to structural plywood, the opportunities for misinterpretation will be minimized. The probability of structural plywood, claimed to be manufactured to this Standard, having the correct assignment of F-grades or characteristic structural properties will be improved, further minimizing the risk to users of the product.

Additionally, this Standard is revised to form Part 0 of the AS/NZS 2269 series, *Plywood—Structural*, which comprises the following parts:

AS/NZS
2269 Plywood—Structural
2269.0 Part 0: Specifications (this Standard)
2269.1 Part 1: Determination of structural properties—Test methods (to supersede AS/NZS 2098.9:1995, *Methods of test for veneer and plywood,* Method 9: *Procedures for in-grade testing of structural plywood*)
2269.2 Part 2: Determination of structural properties—Evaluation methods

Five standard veneer qualities, A, S, B, C and D, are prescribed, as follows:

A—a high quality appearance grade, suitable for clear finishing.

S—an appearance grade, which permits characteristics as a decorative feature.

B—an appearance grade suitable for high quality paint finishing.

C—a non-appearance grade with a solid surface.

D—a non-appearance grade with permitted open imperfections.

The surface grade of the plywood is determined by the quality of the face and back veneers.

Three methods for determining the stress grade for the plywood are described using the following bases:

(a) Veneers of determined stiffness.

(b) Mechanical F-grading of plywood panels.

(c) In-grade testing of plywood panels.

Four formaldehyde emission classes, E0, E1, E2, and E3, are included.

For the design of structures or elements incorporating the use of plywood specified in this Standard, the structural grades will have characteristic strength and stiffness values as detailed in Table 4.1. These characteristic properties are to be assigned in accordance with the requirements of AS 1720.1, *Timber structures*, Part 1: *Design methods*, and NZS 3603, *Timber Structures Standard*.

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This Standard covers the basic structural plywood product. Particular end uses may require additional processing, preservative treatment or surface finishing. Structural plywood that is exposed for a long term to wet or damp conditions, or full weather exposure will need preservative treatment in accordance with AS/NZS1604.3, *Specification for preservative treatment*, Part 3: *Plywood*. Under these exposure conditions the surface of the plywood will need adequate protection.

Notes to the text contain information and guidance. They are not an integral part of the Standard.

Statements expressed in mandatory terms in notes to figures 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.

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Part 0: Specifications

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for the manufacture, grading, finishing and branding of structural plywood. Specifications for both stress and surface grades are also provided. The Standard also specifies veneer quality, bond quality, standard lay-up construction, dimensional tolerances, joints, moisture content and characteristic strength and stiffness values for the nominated F-grades.

The following alternative methods for the determination of stress grades for structural plywood, are also provided:

(a) Veneer stiffness determination.

(b) Mechanical F-grading of the finished sheet of plywood.

(c) In-grade testing of finished plywood panels.

Five surface grades, based on the veneer quality of the face and back veneers, A, S, B, C and D and one bond quality, Type A bond, are prescribed.

1.2 APPLICATION

The specification for any grade of structural plywood shall consist of the requirements given in the following Sections:

(a) General requirements ..... Section 1.

(b) Requirements for veneers ..... Section 2.

(c) Manufacturing requirements ..... Section 3.

(d) Application of stress grades and mechanical properties ..... Section 4.

Relevant requirements are also specified in the following normative Appendices:

(i) Section properties ..... Appendix B.

(ii) Method for mechanically F-grading structural plywood panels ..... Appendix C.

NOTE: Further information and guidance can be found in the following informative Appendices:

(a) For recommendations for correct storage and handling structural plywood, see Appendix A.

(b) For means for demonstrating compliance with this Standard, see Appendix D.

(c) For information to be supplied with inquiries and orders for structural plywood, see Appendix E.

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