AS/NZS 2269:1994

Australian/New Zealand Standard

Plywood—Structural

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TM/8, Plywood Timber Products. It was approved on behalf of the Council of Standards Australia on 8 April 1994 and on behalf of the Council of Standards New Zealand on 8 June 1994. It was published on 14 June 1994.

The following interests are represented on Committee TM/8:

CSIRO, Division of Forest Products
Forest Research Institute, New Zealand
Housing Industry Association, Australia
Institution of Engineers Australia
Plywood Association of Australia
Plywood Manufacturers Association, New Zealand
State Forests of New South Wales
Timber Development Association (N.S.W.)

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First published in Australia in part as AS O85— 1969.
AS O89 first published 1973.
AS O85— 1969 and AS O89— 1973 revised, amalgamated and redesignated AS 2269— 1979.

First published in New Zealand as NZS 3614:1971.

AS 2269— 1979 and NZS 3614:1971 jointly revised and designated as Joint Standard AS/NZS 2269:1994.

Incorporating:
Amdt 1—1996

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA
1 The Crescent,
Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND
Level 10, Standards House,
155 The Terrace,
Wellington 6001 New Zealand

ISBN 0 7262 8908 6

PREFACE

This Standard was prepared by the Joint Australia/New Zealand Standards Committee TM/8 on Plywood Timber Products, as a joint Standard to supersede in Australia AS 2269—1979, *Structural plywood* and in New Zealand NZS 3614:1971, *Specification for the manufacture of construction plywood*.

This revision was undertaken to provide minimum performance requirements and specifications in 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.

Five veneer qualities, A, S, B, C and D, are described:

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

S — an appearance grade which permits natural 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 grade of the plywood is determined by the quality of the face and back veneers.

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

(a) Veneers of identified species.

(b) Veneers of determined density.

(c) Veneers of determined stiffness.

(d) Mechanical stress grading of plywood panels.

(e) In-grade testing of plywood panels.

For the design of structures or elements incorporating the use of plywood specified in this Standard, the structural grades will have basic working stresses and elastic moduli as detailed in Table 4.2. These basic mechanical properties are to be applied in accordance with the requirements of AS 1720.1, *SAA Timber Structures Code*, Part 1—*Design methods* and NZS 3603, *Code of practice for timber design*.

This Standard describes the basic structural plywood product. Particular end uses may require additional processing, preservative treatment or surface finishing. When used externally the surface of structural plywood shall be adequately protected.

It should be noted that the Committee is developing a Standard for immunization and preservative treatment of veneer and plywood which is expected to be completed within 12 months.

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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1.1 SCOPE This Standard specifies requirements for the manufacture and grading of structural plywood. Specifications for both stress and surface grades are also provided. The Standard also specifies veneer qualities, bond quality, standard lay-up construction, dimensional tolerances, joints, moisture content and basic working stresses for the nominated stress grades.

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

(a) species identification;

(b) density determination;

(c) veneer stiffness determination;

(d) mechanical stress grading of the finished sheet of plywood; or

(e) 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 general requirements for veneers given in Section 2 and the manufacturing requirements given in Section 3.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
O1	Glossary of terms used in timber Standards
1199	Sampling procedures and tables for inspection by attributes
1399	Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1604	Timber—Preservative-treated—Sawn and round
1720	Timber Structures (known as the SAA Timber Structures Code)
1720.1	Part 1: Design methods
2098	Methods of test for veneer and plywood
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