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Australian Standard 2269—1979

STRUCTURAL PLYWOOD

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STANDARDS ASSOCIATION OF AUSTRALIA

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Council of Furniture Manufacturers

Australian Institute of Building

Commonwealth and State Forestry Departments

Confederation of Australian Industry

CSIRO, Division of Building Research

Department of Defence

Department of Transport

Lending Institutions

Plywood Association of Australia

Railways of Australia Committee

Royal Australian Institute of Architects

Sawmilling and Timber Associations

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AUSTRALIAN STANDARD

STRUCTURAL PLYWOOD

AS 2269—1979

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PREFACE

This standard was prepared by the Association's Committee on Plywood as a revision, metrication and consolidation of AS O85—1969, Pinus Structural Plywood, and AS O89—1973, Structural Plywood—1600f Stress Grade and 1.55E Stiffness Grade, both of which it accordingly supersedes.

The standard is intended primarily to meet the needs of constructional and industrial users of plywood and the manufacturers of plywood.

Plywood manufactured to the 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 the veneers is judged in the finished sheet. Two veneer qualities are described, one requires an essentially solid face and the other permits open defects. The quality of the plywood is judged by the quality of the face and back veneers.

The stress grades apply for the lower of the two veneer qualities and are determined by—

(a) identification of the species;

(b) determination of the veneer density; or

(c) mechanical stress grading of the whole finished sheet of plywood.

For designs incorporating the use of plywood specified in this standard, the structural grades will have the basic working stresses and elastic moduli set out in Table 4.2. These basic working stresses are applied in accordance with procedures set out in AS 1720, SAA Timber Engineering Code.

Particular end uses may require consideration of treatment with preservatives, overlays and/or paint.

This standard requires reference to the following Australian standards:

AS 1148	Nomenclature of Commercial Timbers Imported into Australia
AS 1604	Preservative-treated Sawn Timber, Veneer and Plywood
AS 1612	Colour for Marking Stress Graded Timber
AS 1720	SAA Timber Engineering Code
AS 2097	Methods for Sampling Veneer and Plywood
AS 2098	Methods of Test for Veneer and Plywood .1—Moisture Content of Veneer and Plywood .2—Bond Quality of Plywood (Chisel Test) .3—Bond Quality and Strength of Scarf Joints in Plywood .4—Dimensions of Sheets of Veneer and Plywood .6—Depth of Peeler Checks in Veneer and Plywood .7—Density of Veneer and Plywood

AS 2193	Methods for Calibration and Grading of Force-measuring Systems of Testing Machines
AS 2270	Plywood and Blockboard for Interior Use
AS 2271	Plywood and Blockboard for Exterior Use
AS 2289	Glossary of Terms Used in the Plywood Industry
AS K88	Synthetic Resin Adhesives for Plywood (Phenolic and Aminoplastic)
AS O1	Glossary of Terms Used in Timber Standards
AS O2	Nomenclature of Australian Timbers

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Australian Standard
for
STRUCTURAL PLYWOOD

SECTION 1. SCOPE AND GENERAL REQUIREMENTS

1.1 SCOPE. This standard specifies requirements for the construction, manufacture, grading and finishing of stress and surface grades of structural plywood. It specifies veneer qualities, bond quality, dimensional tolerances, moisture content and basic working stresses.

The standard prescribes three alternative methods for the determination of stress grades for structural plywood, viz—

(a) species identification;

(b) density determination; and

(c) mechanical stress-grading of the finished sheet of plywood.

Two surface grades, based on veneer quality of the face and back veneers, and one bond quality, viz Type A bond, are prescribed.

Appendices describe sampling, testing and acceptance, stress grading of plywood sheets, physical and mechanical data of structural plywood, stress grades for veneer of individual species, and information to be supplied with enquiries and orders.

1.2 APPLICATION. The specification for any grade of structural plywood shall consist of the general requirements given in Section 1, together with the relevant requirements for veneers given in Section 2 and the manufacturing requirements given in Section 3.

1.3 INTERPRETATION OF TERMS. The terms used in this standard shall be interpreted in accordance with AS 2289 and AS O1.

1.4 GRADES OF STRUCTURAL PLYWOOD.

1.4.1 General. Structural plywood shall be graded according to surface quality and stress grade.

1.4.2 Surface Grades. The surface grades shall be Grade C and Grade D and shall correspond respectively to Quality C veneer and Quality D veneer in accordance with Clause 2.2.

NOTE: Grade C provides for a solid face, whereas Grade D allows open defects.