

AS 2146 and 2147—1978
UDC 69.028.2:69.11
SfB (31)Ri1

Australian Standards 2146 and 2147—1978

TIMBER WINDOW ASSEMBLIES



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 these standards:

**Australian Institute of Builders
Building Owners and Managers Association of Australia
CSIRO, Division of Building Research
Department of Public Works, N.S.W.
Experimental Building Station
Forest Products Association, W.A.
Forestry and Timber Bureau
Forestry Commission of N.S.W.
Housing Commission of N.S.W.
Manufacturing interests
Master Builders Associations
Timber Merchants Association of S.A.**

These standards, prepared by Committee TM/4/2, Timber Windows, were approved on behalf of the Council of the Standards Association of Australia on 6 January 1978, and was published on 1 August 1978.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

These standards were issued in draft form for public review as DR 76016.

AUSTRALIAN STANDARDS

SPECIFICATION FOR

PERFORMANCE OF

TIMBER

WINDOW ASSEMBLIES

AS 2146—1978

together with

CODE OF PRACTICE FOR

THE INSTALLATION OF

TIMBER WINDOWS

IN BUILDINGS

AS 2147—1978

First published 1978

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 1413 2

PREFACE

These standards were prepared by the Association's Committee on Timber Windows.

AS 2146 specifies performance requirements which will allow the development of individual designs for timber windows without restrictions on component shapes or production methods.

Up to now there has been no Australian performance specification for timber windows. The standard applicable to timber windows, viz AS 1540, Timber Frames and Sashes for Windows, deals with traditional methods of construction. Pilot testing of windows constructed in accordance with AS 1540 suggested that they were deficient in regard to water penetration. With the publication of AS 2146, AS 1540 will be revised in order to detail window components that will meet the performance requirements of that standard.

In the preparation of AS 2146 and 2147, account was taken of current practice in Australia including the performance requirements that are specified for aluminium windows in AS 2047, Aluminium Windows for Buildings.

The classification of window assemblies agrees with current practice in the building industry and compliance with the classification will require the mandatory performance tests prescribed.

For aluminium windows AS 2047 requires an air infiltration test not exceeding 5 L/s.m² for non-airconditioned buildings. AS 2146 omits such requirement because the window manufacturer has no control over the applied finishes, but machines clearances to allow for paint, etc which may be (or is) applied after the window leaves the manufacturer's premises.

In AS 2147, the table in Appendix A gives the minimum window rating (in pascals) for buildings to the height of 10 m in the metropolitan areas of Australian capital cities; these ratings are derived from AS 1170, SAA Loading Code, Part 2—Wind Forces, and include the velocity multipliers set out therein. Designers and Statutory Authorities will decide the rating needed for a particular location. The committee considered that local government bodies should be aware of the various terrain categories within their boundaries. Reference to the tables and appendices of AS 1170, Part 2, is necessary to derive that rating.

These standards may require reference to the following Australian Standards:

AS 1170	SAA Loading Code Part 1—Dead and Live Loads Part 2—Wind Forces
AS 1288	Code of Practice for the Installation of Glass in Buildings
AS 1540	Timber Frames and Sashes for Windows
AS 1606	Code of Practice for the Water-repellent Treatment of Timber, Joinery and Other Timber Products

- AS 1789 Electroplated Coatings of Zinc on Iron and Steel
- AS 2098.2 Methods of Test for Veneer and Plywood—Bond Quality of Plywood (Chisel Test)
- AS K88 Synthetic Resin Adhesives for Plywood (Phenolic and Aminoplastic)
- AS K109 Wood Priming Paint, Oil Base
- AS O1 Glossary of Terms Used in Timber Standards

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STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard Specification
for
PERFORMANCE OF TIMBER WINDOW ASSEMBLIES**

SECTION 1. SCOPE AND DEFINITIONS

1.1 SCOPE. This specification sets out requirements for the performance of timber window assemblies including fixed lights and sashes.

1.2 DEFINITIONS. The terms used in this specification shall be interpreted in accordance with AS O1* and the following:

Bar, glazing—a twice rebated intermediate timber bar of a sash, dividing the glazing into smaller panes.

Chair rail—a deep fixed horizontal framing member used as a guard rail and set at a specific height. It may, as an integral part of the framing, carry the glazing.

Frame, window—that part of a window assembly surrounding the sashes or fixed glazing. It may be either a solid frame or a box frame.

Hardware—apparatus used in the opening, operating, closing and locking of window sashes and including stays, hinges, locks, catches, handles, lifts, balances or weights and fasteners.

Head, frame—a transverse member forming the top of a frame, usually horizontal.

Jamb—the vertical sides of an opening and the vertical side member of a frame.

Light—a single panel of glazing in a window assembly.

Mullion—a vertical intermediate framing member.

Rail, sash—top and bottom members of a sash.

Sash—the separate, lighter frame to a window, carrying the glass. It may be fixed or movable.

Sash, awning—an outward opening sash hung about a horizontal axis at the top or on friction stays.

Sashes, double hung—sashes which slide vertically.

Sash, hopper—a sash hinged horizontally at the bottom to open inwards. It may be fitted with side checks.

Sash, pivot hung—a sash hung about a horizontal axis just above the centre of balance so that the sash will swing to the closed position under its own weight.

*AS O1, Glossary of Terms Used in Timber Standards.