

Australian Standard™

**Timber—Hardwood—Sawn and milled
products**

Part 1: Product specification

This Australian Standard was prepared by Committee TM/7, Sawn, Milled and Specialty Timber Products. It was approved on behalf of the Council of Standards Australia on 13 August 1999 and published on 5 September 1999.

The following interests are represented on Committee TM/7:

Australian Building Codes Board
Australian Timber Importers Federation
Construction Information Systems, Australia
Consumers Federation of Australia
CSIRO—Forestry and Forest Products
Department of Conservation and Land Management, Western Australia
Forestry Queensland
Furntech
Housing Industry Association
New Zealand Timber Industry Federation
New Zealand Timber Supplies Group
Pine Australia
Royal Melbourne Institute of Technology
State Forests of New South Wales
Timber Promotion Council
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This Standard was issued in draft form for comment as DR 98247.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2796.1—1999

Timber—Hardwood—Sawn and milled products

Part 1: Product specification

RECONFIRMATION NOTICE

Technical Committee TM-012 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 20 May 2016.

The following are represented on Technical Committee TM-012:

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Australian Forest Products Association
Australian Pesticides and Veterinary Medicines Authority
Australian Timber Flooring Association
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New Zealand Wood Processors Association
Responsible Care New Zealand
Scion
Tasmanian Timber Promotion Board
Timber Preservers Association of Australia

NOTES

Australian Standard™

Timber—Hardwood—Sawn and milled products

Part 1: Product specification

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PREFACE

This Standard was prepared by Joint Standards Australian/Standards New Zealand Committee TM/7, Sawn, Milled and Speciality Timber Products, to supersede (in part) AS 2796—1985, *Timber—Seasoned hardwood—Milled products*, (in part) AS 1261—1972, *Wood mosaic parquet*, AS 2796.P1—1985, *Wall chart—Summary of surface finishes for seasoned hardwood milled products* (in accordance with AS 2796), AS 2796.P2—1985, *Wall chart—Summary of permissible machining imperfections for seasoned hardwood milled products* (in accordance with AS 2796) and (in part) AS O71—1960, *Wood blocks for parquetry flooring*.

This Standard is the result of a consensus among Australian and New Zealand representatives on the joint committee to produce it as an Australian Standard.

The objective of this Standard is to provide producers and users with product requirements for solid hardwood timber sawn and milled products, and sawn boards intended as feedstock for such products, intended for use in building. Some of the products specified in this Standard are required to be structurally adequate for their intended use.

This Standard is Part 1 of the AS 2796 series, which consists of the following:

AS

2796 Timber—Hardwood—Sawn and milled products

2796.1 Part 1: Product specification (this Standard)

2796.2 Part 2: Grade description

2796.3 Part 3: Timber for furniture components

Parts 1 and 2 supersede AS 2796—1985, AS 1261 and AS O71.

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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STANDARDS AUSTRALIA

Australian Standard

Timber—Hardwood—Sawn and milled products

Part 1: Product specification

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies product requirements, including tolerances, for tongued and grooved strip flooring, light decking, overlay strip flooring, parquet flooring, lining, dressed boards, joinery, mouldings, cladding, fascia and bargeboards sawn or milled from hardwood.

This Standard also specifies product requirements, including tolerances, for sawn boards intended as feedstock for the above products.

NOTES:

- 1 The coverage by this Standard of all hardwood species does not imply their availability nor the availability of every grade (see Clause 1.5) in any species or species group.
- 2 Milled timber for window frames, sashes and sills is specified in AS 2047.1.
- 3 Timber for furniture components is specified in AS 2796.3.
- 4 Guidance on information to be supplied by purchasers is given in Appendix A.
- 5 This Standard may be used as a basis for a third party product certification scheme.

1.2 APPLICATION

Sawn and milled timber products shall comply with the applicable general requirements and product requirements given in the appropriate Section or Appendix as follows:

- (a) General requirements..... Section 2.
- (b) Strip flooring Section 3.
- (c) Light decking Section 4.
- (d) Parquet flooring Section 5.
- (e) Lining..... Section 6.
- (f) Dressed boards, joinery and mouldings Section 7.
- (g) Cladding, fascia and bargeboards..... Section 8.
- (h) Sawn boards for feedstock (dressing)..... Section 9.
- (i) Overlay strip flooring.....Section 10.
- (j) Limits of machining imperfections and surface finish imperfections Appendix B.
- (k) Permissible limits for bow, spring, twist and cup Appendix C.

NOTE: This Standard should be read in conjunction with AS 2796.2 which provides grade descriptions appropriate for use when specifying the above products (see Clause 1.5).

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1148 Nomenclature of commercial timbers imported into Australia
- 1604 Timber—Preservative-treated—Sawn and round
- 1684 The National Timber Framing Code
- 2047 Windows in buildings
- 2047.1 Part 1: Specification for materials and performance
- 2543 Nomenclature of Australian timbers
- 2688 Timber doors
- 2689 Timber doorsets
- 2754 Adhesives for timer and timber products
- 2754.3 Part 3: Adhesives for non-structural applications
- 2796 Timber—Hardwood—Sawn and milled products
- 2796.2 Part 2: Grade description
- 2796.3 Part 3: Timber for furniture components
- 3818 Timber—Heavy structural products—Visually graded

AS/NZS

- 1080 Timber—Methods of test
- 1080.1 Method 1: Moisture content
- 1328 Glued laminated structural timber
- 1328.1 Part 1: Performance requirements and minimum production requirements
- 1491 Finger jointed structural timber
- 4491 Timber—Glossary of terms in timber-related Standards

1.4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS/NZS 4491 and those below apply. Where the definitions in this Standard differ from those given in AS/NZS 4491, for the purpose of this Standard those below apply.

1.4.1 Bargeboard

Sawn or dressed boards that form a decorative capping at each end of a gable roof. Depending on the roof design and construction requirements, they can be fixed to either the side of the flying rafters, the top chord of a truss, or directly to the ends of the roof outriggers. They are fixed at an angle corresponding to the slope of the roof and, at their lower ends, are usually fixed to the end of the fascia.

NOTE: See Figure D1, Appendix D.

1.4.2 Board width

For the purpose of grading, the overall finished width of the piece, including any tongue (see Clause 2.6).

NOTE: See also Figures D2 and D3, Appendix D.

1.4.3 Cladding

Dressed or sawn boards that form part of the external wall covering whose function includes keeping weather out of a structure.

1.4.4 Component module

An assembly of mosaic fingers placed edge to edge, to form a square or other shape (see Section 5).

1.4.5 Concealed surface

That part of a surface intended to be concealed from view when the product is fixed into position or is assembled.

1.4.6 Cover width

The actual width that will become the exposed surface when a product is fixed into position (see Clause 2.6).

NOTE: See also Figures D2 and D3, Appendix D.

1.4.7 Exposed surface

That part of a surface intended to be exposed to view when the product is fixed into position or is assembled.

1.4.8 Fascia

Sawn or dressed boards that form part of the decorative perimeter of the roof. They serve a dual purpose, being decorative, in that they can hide as well as support internal spouting (box guttering), and functional, in that they can be used to support external spouting while still being decorative. They are fixed horizontally to the ends of the rafters or trusses and serve to both hide the ends of the rafters or trusses and to support the outside edge of the under-eaves.

NOTE: See Figure D1, Appendix D.

1.4.9 Feedstock

Sawn and partially processed boards intended for further processing into sawn or milled products.

1.4.10 Heartwood

Wood which in the living tree had ceased to contain living cells and in which the reserve materials, e.g. starch, had been removed or changed into more durable substance.

1.4.11 Light decking

Dressed, sawn or reeded boards, produced with or without chamfered or rounded arrises, primarily intended for domestic deck purposes; not to be confused with bridge and wharf decking.

1.4.12 Lining

Dressed or sawn boards that are intended to form part of the interior wall or ceiling covering of a structure.

1.4.13 Moulding

A piece of timber machined to a specified profile for use in finishing or decorating.

1.4.14 Mosaic finger

A small solid wood component of regular form with machine planed edges, fine sawn or planed faces, and fine sawn ends (see Section 5).

1.4.15 Mosaic parquet panel

A single layer of component modules which are pre-assembled and held together to form a tile or a panel (see Section 5).

1.4.16 Overlap

The difference between board width and cover width of weatherboards, chamferboards and some lining board profiles.

NOTE: See Figure D3, Appendix D.

1.4.17 Overlay strip flooring

A milled product intended to be installed over a solid supporting substrate to give the appearance of strip flooring.

1.4.18 Parquet flooring

Flooring consisting of either mosaic parquet panel or wood block parquet.

1.4.19 Square-dressed edge-grained wood block

Wood block that has its length dimension parallel to the grain (see Section 5).

1.4.20 Strip flooring

Flooring made from machined timber with tongued and grooved joints intended to be installed over joists, battens or an underlay. This may be end-matched.

1.4.21 Wood block parquet

Parquet made from wood blocks, sometimes of different species, sizes and shapes, arranged in a pattern, intended to be bonded to a subfloor either directly or over an underlay (see Section 5).

1.5 GRADES

The grades specified in AS 2796.2 are primarily based on features and desired aesthetic appearance. The grades of hardwood products described in AS 2796.2 are as follows (appropriate abbreviations in brackets):

- (a) SELECT GRADE (SEL).
- (b) MEDIUM FEATURE GRADE—Standard (MF).
- (c) HIGH FEATURE GRADE (HF).
- (d) PARQUET CLEAR.

This Standard does not preclude the use of grades other than those described in AS 2796.2, provided that it can be shown that these other grades satisfy the performance requirements for that product. Any such other grade description shall be adequately documented and the product identified in accordance with Clause 1.6 (see also Clause 1.7).

Other grades may be specified by agreement between the purchaser and supplier (see Clause 1.7). However, adequate strength shall be maintained for flooring and light decking.

NOTES:

- 1 See Appendix A for guidelines on the information to be supplied with enquiries or orders.
- 2 Some combinations of product, grade and species may not necessarily be available. Availability should be checked before specifying.

1.6 PRODUCT IDENTIFICATION

If the product is branded, labelled, stamped or otherwise marked to indicate that it complies with this Standard, the information shall be legible and shall include the following:

- (a) The number of this Standard, i.e. AS 2796.1.
- (b) Identification of the manufacturer of the product (optional).

- (c) The product type, (e.g. decking, flooring) except where the product or its application are readily identified by the shape or profile.
- (d) The grade, e.g. SELECT, MEDIUM FEATURE—Standard, HIGH FEATURE, or grade other than those described in AS 2796.2 (see Clauses 1.5 and 1.7).

NOTE: The appropriate abbreviation may be used.

The grade title, or its abbreviation, of any grade other than those described in AS 2796.2 shall be such that it will not be confused with one of the titles or its abbreviation of a grade described in AS 2796.2 (see Clause 1.7).

NOTE: Legislation in some States of Australia requires that if timber is marked with any or all of the items in this Clause, the timber has to comply with that marking (see also the Note to Clause 1.7).

1.7 CLAIM OF COMPLIANCE

In any statement or claim of compliance with this Standard, one of the following shall apply:

- (a) Reference only to AS 2796.1 is a claim of compliance with the product requirements as set out in this Standard but not necessarily any particular grade. However, it is also a claim that product performance is appropriate for the intended use.
- (b) Reference to one of the grades described in AS 2796.2 is a claim of compliance with both the product requirements as set out in this Standard (AS 2796.1) and the nominated grade requirements as set out in AS 2796.2.
- (c) Reference to AS 2796.1 and a grade other than those described in AS 2796.2 is a claim of compliance with the product requirements as set out in this Standard and the requirements of the other grade. However, it is also a claim that product performance is appropriate for the intended use.

NOTE: Manufacturers making a statement of compliance with this Australian Standard on a product, packaging, or promotional material related to that product are advised to ensure that such compliance is capable of being verified.--

SECTION 2 GENERAL REQUIREMENTS

2.1 TIMBER SPECIES

Sawn and milled hardwood products shall be supplied in parcels complying with one of the following:

- (a) Mixed hardwoods where the species are similar in properties or appearance, or in both.
- (b) Mixed hardwoods where the species are deliberately selected with dissimilar appearance.
- (c) Single species.

NOTES:

- 1 The make-up of a parcel, i.e. mixed similar species, mixed dissimilar species or single species, should be specified by the purchaser. See Appendix A.
- 2 This Standard does not specify durability and colour except as in Clause 2.3.
- 3 The timber species selected for exterior use should have sufficient natural durability or be given an appropriate level of preservative treatment in accordance with AS 1604.
- 4 Care should be taken to select species of appropriate hardness to suit the application.

2.2 MOISTURE CONTENT AND DRYING QUALITY

For sawn or milled products the moisture content anywhere within the piece being graded shall be within the moisture content range given in the appropriate section of this Standard for that product.

Where it is desired to have a moisture content specification other than the moisture content range specified for a product then, by agreement between the purchaser and supplier, an appropriate range may be specified or a drying quality may be specified (see Note 3).

The moisture content of the timber shall be determined in accordance with AS/NZS 1080.1.

NOTES:

- 1 Attention is drawn to the need to consider any circumstances in which the timber may require seasoning to a particular moisture content specification, e.g. in areas of high or low equilibrium moisture content. For particular applications, a different range may be required for the moisture content specification.
- 2 In New South Wales and Queensland, timber vendors and users should be familiar with the special requirements applying to seasoned timber, as provided by the *New South Wales Timber Marketing Act*, and the *Queensland Timber Utilization and Marketing Act*, respectively.
- 3 The Australasian Timber Drying Group is preparing a specification on drying quality.

2.3 SAPWOOD AND LOW DURABILITY HEARTWOOD

Some products covered by this Standard could be used in exposed situations or other areas of significant decay risk. Untreated sapwood and low durability heartwood are not restricted by the grading rules in AS 2796.2 except for limits on Lyctid susceptible sapwood.

However, building codes and AS 1684 restrict the use of low durability timber including untreated sapwood where such timber is not suitably protected from the ingress of moisture.

NOTES:

- 1 Further information is given in Appendix E

- 2 Where products are used in weather-exposed or other hazardous situations, the presence of untreated sapwood and untreated heartwood of low durability requires ongoing maintenance to ensure an adequate service life.
- 3 The untreated sapwood of any species is considered non-durable when exposed to the weather or the ingress of moisture, regardless of the durability rating of the heartwood of that species. To achieve maximum service life, any untreated sapwood must be protected from weather exposure and the ingress of moisture.
- 4 For decking, the degree of weather exposure of all the surfaces is usually extreme and any protective coating is difficult to maintain effectively. Decking is generally horizontal and as a result does not shed water readily.

2.4 SAPWOOD SUSCEPTIBLE TO LYCTID BORERS

Sapwood susceptible to Lyctid borers shall be immunised against such attack in accordance with AS 1604.

NOTES:

- 1 The method for the detection of Lyctid susceptible sapwood is given in AS 1604.
- 2 Guidelines for the immunization of susceptible sapwood are given in AS 1604 and further information is available from state forestry departments and the CSIRO.

2.5 PRESERVATIVE TREATMENT

Where timber is preservative treated, treatment shall be in accordance with AS 1604.

If products are preservative-treated with a waterborne preservative, the moisture content of the products will increase. Products so treated shall be re-seasoned to comply with the seasoning requirements for those products.

NOTE: The Queensland Timber Utilization and Marketing Act, and the New South Wales Timber Marketing Act, require prior approval of a preservative treatment system and registration of a brand before timber offered for sale in either of those States can be described as preservative-treated. Detailed information about the requirements of such legislation may be obtained from the state forestry departments concerned.

2.6 MEASUREMENT OF DIMENSIONS AND DISTORTIONS

2.6.1 Dimensions

Cross-sectional dimensions of rectangular sections and profiled sections shall be measured as shown in Figures 2.1 and 2.2.

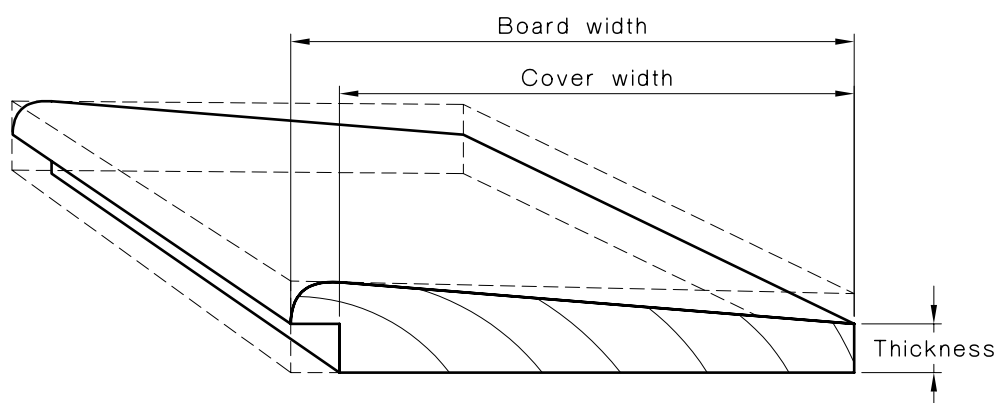


FIGURE 2.1 DIMENSIONS OF MOULDED SECTION

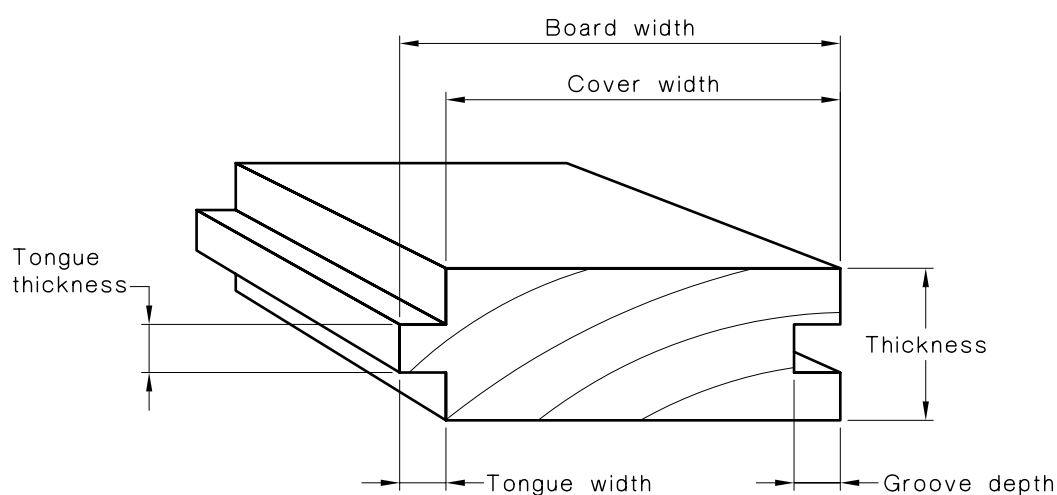


FIGURE 2.2 DIMENSIONS OF TONGUED AND GROOVED SECTION

2.6.2 Bow and spring

Bow and spring shall be measured as the maximum distance perpendicular to the surface of any point on the face (bow) or edge (spring) from a straight line joining the arris at one end of the piece to the same arris at the other end (see Figures 2.3 and 2.4).

When a piece has a combination of at least two of bow, spring, twist or cup, care needs to be exercised to measure each separately.

Values for maximum permissible bow and spring for appropriate products are given in Tables C1 and C2, Appendix C.