

Australian Standard™

**Timber—Softwood—
Sawn and milled products**

Part 3: Timber for furniture components



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This Australian Standard was prepared by Committee TM-007, Sawn, Milled and Speciality Timber Products. It was approved on behalf of the Council of Standards Australia on 31 August 2001 and published on 4 January 2002.

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Australian Timber Importers Federation
Construction Information Systems, Australia
Consumers Federation of Australia
Forest Products Commission (WA)
Furntech
Housing Industry Association
Master Builders Australia
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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 4785.3—2002

Timber—Softwood—Sawn and milled products

Part 3: Timber for furniture components

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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.

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NOTES

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-007, Sawn, Milled and Speciality Timber Products.

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 suppliers and purchasers of softwood furniture timber with product requirements and grading rules for such timber intended for use in the manufacture of furniture.

This Standard is Part 3 of the AS 4785 series, which consists of the following:

AS

4785 Timber—Softwood—Sawn and milled products

4785.1 Part 1: Product specification

4785.2 Part 2: Grade description

4785.3 Part 3: Timber for furniture components (this Standard)

During the course of preparation for this Standard, consideration was given to research, industry comment and related information from sources in Australia and overseas.

Although much of the content of this Standard is similar to clauses found in AS 4785.1 and AS 4785.2, it has been produced due to requests from the furniture industry.

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—Softwood—Sawn and milled products

Part 3: Timber for furniture components

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies product and grade requirements for timber for furniture components sawn or milled from softwood.

This Standard also specifies tolerances for sawn boards intended as feedstock for furniture components.

NOTE: The coverage of any softwood species by this Standard does not imply its availability nor the availability of every grade in any species or species group.

1.2 APPLICATION

Sawn or milled softwood timber for furniture components shall comply with the product requirements given in Section 2, together with the grade requirements given in Appendices A and B.

NOTE: Information to be supplied with enquires and orders is given in Appendix C.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1604 Timber—Preservative-treated—Sawn and round
- 1604.1 Part 1: Sawn and round timber
- 1810 Timber—Seasoned cypress pine—Milled products
- 2754 Adhesives for timber and timber products
- 2754.3 Part 3: Adhesives for non-structural applications

AS/NZS

- 1080 Timber—Methods of test
- 1080.1 Method 1: Moisture content
- 1080.2.1 Method 2.1: Slope of grain by scribe
- 1080.2.2 Method 2.2: Slope of grain by reference to surface checks
- 1080.2.3 Method 2.3: Slope of grain by splintering
- 1148 Timber—Nomenclature—Australian, New Zealand and imported species
- 1328 Glue 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
- 4787 Timber—Assessment of drying quality

1.4 DEFINITIONS

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

1.4.1 Concealed surface

A surface, or part thereof, that is intended to be concealed from view when the product is fixed into position or assembled.

1.4.2 Exposed surface

A surface, or part thereof, that is intended to be exposed to view when the product is fixed into position or assembled.

1.4.3 Feedstock

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

1.4.4 Heartwood

Wood that 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.

1.4.5 Pith

The central core of a stem consisting chiefly of parenchyma or soft tissue.

1.4.6 Surface check

A check confined mainly to the surface of a piece but of no appreciable depth, i.e. depth not exceeding 10 percent of the thickness of the piece.

1.4.7 Sticker mark

A mark occurring during the seasoning process, which is left under the strips, fillets, battens or stickers and which may be lighter or darker than the rest of the surface.

1.4.8 Termite gallery

An irregularly shaped passage or burrow excavated by termites in the bark or wood. An enclosed termite gallery is one that is not completely open to visual inspection throughout its entire length.

1.5 GRADES

The following grades apply to timber used as timber for furniture components:

- (a) *For pinus species*—the following five grades are specified in Appendix A:
 - (i) FURNITURE CLEAR GRADE (FCL).
 - (ii) FURNITURE APPEARANCE GRADE (FAP).
 - (iii) FURNITURE SELECT GRADE (FSEL).
 - (iv) FURNITURE STANDARD GRADE (FSTD).
 - (v) FURNITURE UTILITY GRADE (FUTL).
- (b) *For other species*—the following four grades are specified in Appendix B:
 - (i) FURNITURE CLEAR GRADE (FCL).
 - (ii) FURNITURE SELECT GRADE (FSEL).
 - (iii) FURNITURE STANDARD GRADE (FSTD).
 - (iv) FURNITURE UTILITY GRADE (FUTL).

- (c) *For cypress (Callitris glaucophylla)*—the grades are specified in AS 1810.

NOTES:

- 1 The attention of intending purchasers is drawn to Appendix C for information to be supplied with enquiries or orders.
- 2 Some combinations of 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 following legible information shall be included:

- (a) Reference to this Standard, i.e. AS 4785.3.
- (b) Identification of the manufacturer of the product (optional).
- (c) Species or species group (optional).
- (d) The grade, e.g. 'FURNITURE SELECT'.

NOTES:

- 1 The appropriate abbreviation may be used (see Clause 1.5).
- 2 Legislation in some States of Australia requires that if timber is marked with any or all of the items in this Clause, the timber must comply with that marking.
- 3 Manufacturers making a statement of compliance with this 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 PRODUCT REQUIREMENTS

2.1 TOLERANCES

At the time of grading, the actual dimensions of sawn boards shall be—

- (a) not more than 2 mm below an ordered nominal cross-section size; or
- (b) where specified, not less than the agreed cross-section size.

At the time of machining, the tolerances on any dimension in thickness and width of dressed boards shall be ± 0.5 mm.

2.2 MOISTURE CONTENT/DRYING QUALITY

For sawn or milled timber for furniture components, the moisture content anywhere within the piece being graded shall be 10 ± 2 percent. Where it is desired to have a moisture content specification other than the moisture content specified in this Standard 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 that may require seasoning to a particular moisture content, e.g. in areas of high or low equilibrium moisture content. For particular applications, a reduced 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 AS/NZS 4787 sets out procedures for assessment of drying quality.

2.3 SAPWOOD AND LOW DURABILITY HEARTWOOD

Timber graded to this Standard is sometimes used in exposed situations or other areas of significant decay risk. Untreated sapwood and untreated low durability heartwood are not restricted by the grading rules in this Standard except for the limits on lyctid-susceptible sapwood. However, experience has shown that the use of low durability timber including untreated sapwood in situations where such timber is not protected from the ingress of moisture is detrimental to the life of the product.

NOTES:

- 1 Where furniture timber is used in weather-exposed or other hazard situations, the presence of untreated sapwood and untreated low durability heartwood requires ongoing maintenance to ensure an adequate service life.
- 2 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 has to be protected from exposure to the weather and the ingress of moisture.

2.4 PRESERVATIVE TREATMENT

Where timber is preservative-treated, the treatment shall be in accordance with AS 1604.1.

Where 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 and registration of a brand before timber offered for sale in either of these states can be described as preservative treated. Detailed information about the requirements of such legislation may be obtained from the state forestry departments concerned.

2.5 MEASUREMENT OF DISTORTIONS

2.5.1 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 2.1 and 2.2).

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 shall be as given in Tables D1 and D2, Appendix D.

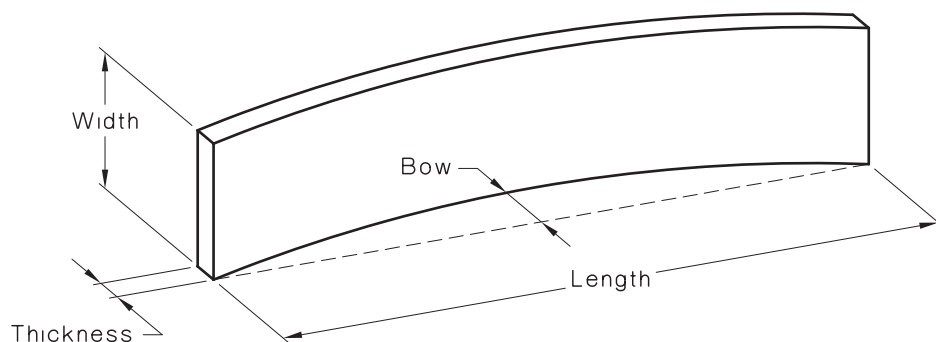


FIGURE 2.1 MEASUREMENT OF BOW

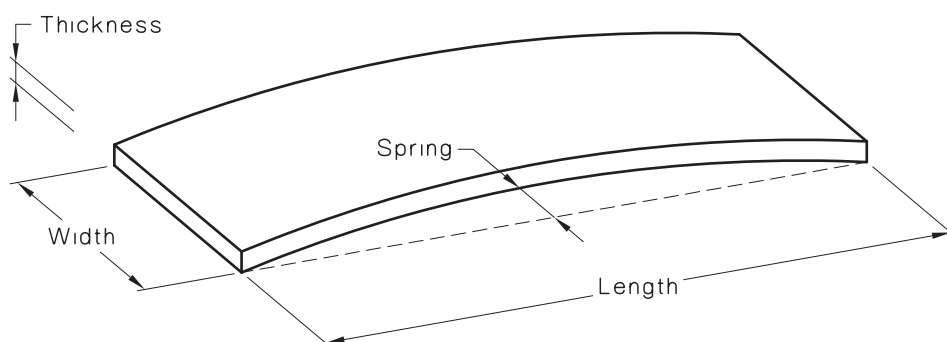


FIGURE 2.2 MEASUREMENT OF SPRING

2.5.2 Twist

Twist shall be measured by placing the piece so that three of its corners are in contact with a flat surface and measuring the perpendicular distance from the fourth corner to the flat surface (see Figure 2.3).

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 twist for appropriate products shall be as given in Table D3, Appendix D.

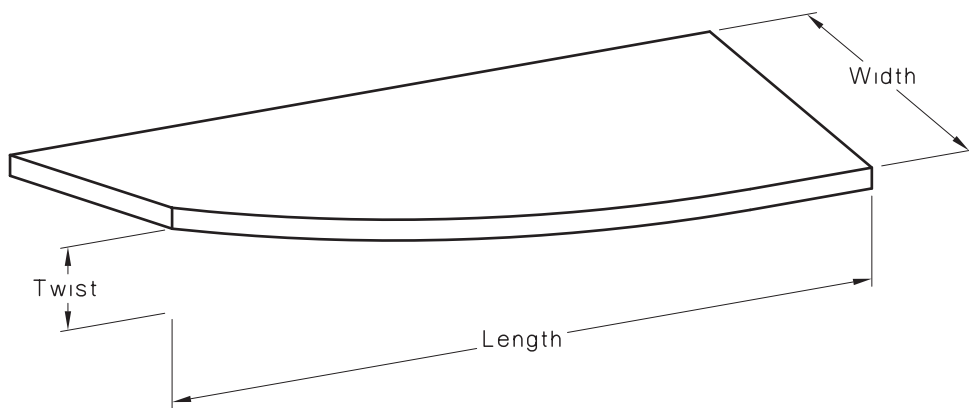


FIGURE 2.3 MEASUREMENT OF TWIST

2.5.3 Cup

Cup shall be measured on the concave surface as the maximum perpendicular distance of any point on the surface of the piece from a straight line joining the arrises of that surface (see Figure 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 cup for appropriate products shall be as given in Table D3, Appendix D.

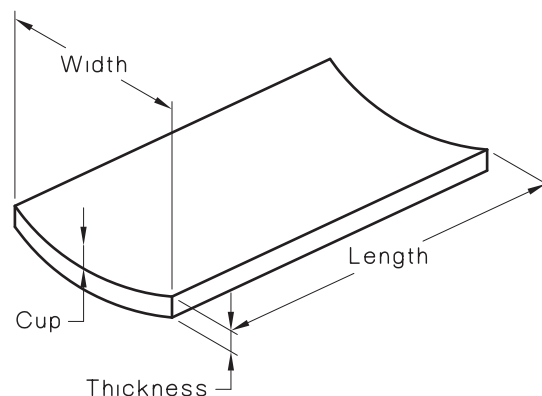


FIGURE 2.4 MEASUREMENT OF CUP

2.6 TIMBER SURFACES

2.6.1 Types of timber surfaces

The surfaces of timber for furniture components may be machined, textured, sawn or as otherwise specified.

2.6.2 Machining imperfections and surface finish imperfections

Machining imperfections and surface finish imperfections on exposed surfaces shall not exceed the limits specified in Table 1, or as otherwise specified.

Machining imperfections and surface finish imperfections on concealed surfaces, which do not prevent the proper fixing of the piece or unduly impair its strength, are permitted.

TABLE 1
LIMITS OF MACHINING IMPERFECTIONS AND SURFACE FINISH
IMPERFECTIONS ON EXPOSED SURFACES OF SOFTWOOD PRODUCTS

Product	Limits of imperfections
Timber for furniture components	<i>Skip, hit and miss</i>—not permitted <i>Cutter marks</i>—must exceed 15 in number per 30 mm <i>Raised grain, ridges, torn grain</i>—permitted, provided there is not more than 0.5 mm variation from the normal surface <i>Chip marks or roller marks</i>—permitted, provided a continuous one-third of length is unaffected <i>Pause marks or glazed surfaces</i>—permitted, provided each occurs not more than once per piece <i>Knot chipping</i>—permitted, provided it does not exceed 3 mm in width <i>Torn corners and edges, gouge, kick out</i>—not permitted.

2.7 FINGER JOINTING

Where timber for furniture components is finger jointed, the finger jointing shall comply with the requirements given in Appendix E.

NOTE: Where finger jointing is considered unsuitable by the specifier on the basis of appearance, strength or durability, the product should be ordered without finger jointing.

2.8 GLUE LAMINATED PRODUCTS

Where timber for furniture components is of glued laminar construction, it shall comply with requirements given in Appendix F.

NOTE: Where glue laminating is considered unsuitable by the specifier on the basis of appearance, strength or durability, the product should be ordered without glue laminating.

SECTION 3 GRADING REQUIREMENTS

3.1 GRADING METHOD

3.1.1 General

Each piece of timber shall be graded on the face, back, edges and ends, as appropriate, in accordance with the general requirements of this Standard and the appropriate grade description given in Appendix A or B.

For all grades of timber for furniture components, during grading at least one face shall be considered as an exposed surface.

NOTE: Where the back and edges are exposed to view, the grade of the back and edges should be of an agreed face grade.

3.1.2 Basis

Grading is based on considering individual pieces by visually assessing the relationship of the amount (size) of a feature or group of features (within a piece) to the maximum amount of that feature permitted in the grade.

The maximum amounts of feature permitted are set out in a grade description. All features in the piece shall comply with the limits given in the grade description.

Grade descriptions are primarily based on features and desired aesthetic appearance. They are also based on utility considerations.

3.1.3 Grade limits

The grade descriptions describe material on the lower limit of the particular grade. Each parcel shall contain a range of material such that not all of the material is near the lower limits of the grade.

3.1.4 Variation in assessment

Within any parcel, a maximum variation of 5 percent between the gradings of pieces by individual inspectors or graders shall be acceptable, provided that none of the pieces in the disputed 5 percent has features that exceed the maximum limit allowed in the grade by more than 10 percent.

3.1.5 Grading check

A check of the grading of the timber may be required some time after the grading undertaken by the producer or supplier.

Where the purpose of the check is to estimate the accuracy of the previous grading, reasonable allowance shall be made for changes in characteristics of the timber, which are the result of moisture change. These changes in characteristics include but are not limited to—

- (a) reduction in dimensions (shrinkage);
- (b) increase in distortion (bow, spring, twist and cup); and
- (c) increase in, or development of, seasoning checks, splits, end splits and shakes; and

NOTES:

- 1 Changes in the characteristics of timber due to moisture change can be minimized from the time that it is machined, by correct downstream protection, handling, transport and storage until it is placed in service. Procedures may include end grain sealing, wrapping, maintaining block packs and level storage and sealing the timber with pale coloured sealers (paints, etc.) immediately upon removal from packs and placing in service.