

Australian/New Zealand Standard®

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**Timber—Glossary of terms in  
timber-related Standards**

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TM/3, Timber Grading. It was approved on behalf of the Council of Standards Australia on 25 July 1997 and on behalf of the Council of Standards New Zealand on 22 August 1997. It was published on 5 November 1997.

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The following interests are represented on Committee TM/3:

CSIRO—Division of Building, Construction and Engineering  
Department of Primary Industries Qld Forest Service  
Housing Industry Association  
Master Builders Australia  
National Association of Forest Industries, Australia  
New Zealand Forest Research Institute  
New Zealand Timber Industry Federation  
New Zealand Timber Suppliers Group  
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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**RECONFIRMATION**

**OF**

**AS/NZS 4491:1997**

**Timber—Glossary of terms in timber related-Standards**

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**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.

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The following are represented on Technical Committee TM-012:

Australian and New Zealand Timber Preservative Manufacturers Association  
Australian Forest Products Association  
Australian Pesticides and Veterinary Medicines Authority  
Australian Timber Flooring Association  
Australian Timber Importers Federation  
Building Research Association of New Zealand  
Department of Agriculture, Fisheries and Forestry (QLD)  
Engineered Wood Products Association of Australasia  
Forest and Wood Products Australia  
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New Zealand Timber Industry Federation  
New Zealand Timber Preservation Council  
New Zealand Wood Processors Association  
Responsible Care New Zealand  
Scion  
Tasmanian Timber Promotion Board  
Timber Preservers Association of Australia

## NOTES

AS/NZS 4491:1997

Australian/New Zealand Standard®

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## **Timber—Glossary of terms in timber-related Standards**

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM/3, Timber Grading, to supersede AS O1—1964, *Glossary of terms used in timber Standards* and AS 2289—1979, *Glossary of terms used in the plywood industry*.

This Standard includes definitions of terms used in timber-related Australian and New Zealand Standards including those used for plywood.

The list is not exhaustive, but the Committee attempted to include new products introduced since the last edition in 1964 and updated technical definitions reflecting changes in terminology and methods.

Fundamental technical differences prevent the adoption of ISO 1031, *Coniferous sawn timber—Defects—Terms and definitions* and ISO 2300, *Sawn timber of broadleaved species—Defects—Terms and definitions*.

The terms in this Standard are arranged in alphabetical order.

Where the definition of terms relating to a common subject are listed under an appropriate headword, the individual terms are cross-referenced to that headword. For example ‘**sap stain**’ is cross-referenced to ‘**stain**’.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard****Timber—Glossary of terms in timber-related Standards**

| <b>Term</b>                 | <b>Definition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A-type bond                 | <i>See</i> <b>bond type</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>absorption</b>           | The amount of liquid taken up by wood during wood preservation treatment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>absorption, initial</b>  | The amount of preservative absorbed by wood while the pressure cylinder is being filled prior to the pressure period, during wood preservation treatment.                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>absorption, water</b>    | The percentage increase in weight of a sample when soaked in water for a given period of time, usually 1 h or 24 h. Usually the temperature of the water is defined, e.g. 20°C.                                                                                                                                                                                                                                                                                                                                                            |
| <b>accelerator</b>          | A material added to an adhesive to speed up setting.<br><i>See also</i> <b>catalyst, hardener, retarder</b> .                                                                                                                                                                                                                                                                                                                                                                                                                              |
| acoustic plywood            | <i>See</i> <b>plywood, perforated</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>additive</b>             | Any material incorporated into plywood during the course of initial manufacture or a post-treatment to impart special properties. Usually includes water-repellents, fire-retardants, fungicides and pesticides.<br><i>See also</i> <b>adhesive, filler</b> .                                                                                                                                                                                                                                                                              |
| <b>adherend</b>             | One of the two bodies which are held together by an adhesive.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>adhesion, mechanical</b> | Bonding produced by interlocking of solidified adhesive with irregularities in the surfaces being joined.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>adhesion, specific</b>   | Bonding generally considered to be due to molecular forces acting between the wood and the adhesive. Not dependent on surface irregularities.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>adhesive</b>             | A substance capable of holding materials together by surface attachment ( <i>see also</i> <b>bond, extender, stain</b> ). It is a general term and includes cement, mucilage, paste and glue and may be either of the following: <ul style="list-style-type: none"> <li>(a) <i>cold setting</i>—An adhesive which does not require the application of additional heat for curing.</li> <li>(b) <i>hot setting</i>—An adhesive system that requires application of heat for curing. Generally temperatures above 100°C are used.</li> </ul> |
| <b>adhesive film</b>        | Adhesives in sheet form with or without reinforcing material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| air-dried                   | <i>See</i> <b>moisture content</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| air-dry            | <i>See</i> <b>moisture content</b>                                                                                                                                                                                                                                                                                                                                                                        |
| <b>amenable</b>    | (in wood preservation) Easily impregnated with preservative.                                                                                                                                                                                                                                                                                                                                              |
| angle clearance    | <i>See</i> <b>knife clearance angle</b>                                                                                                                                                                                                                                                                                                                                                                   |
| angle, wedge       | <i>See</i> <b>knife wedge angle</b>                                                                                                                                                                                                                                                                                                                                                                       |
| <b>annual ring</b> | A growth ring usually corresponding to an annual period of growth, visible in a cross-section of a stem.                                                                                                                                                                                                                                                                                                  |
| <b>ant, white</b>  | (incorrect term) <i>See</i> <b>termites</b>                                                                                                                                                                                                                                                                                                                                                               |
| <b>architrave</b>  | A moulding used as a surround to an opening to cover the gap between joinery and adjoining work.                                                                                                                                                                                                                                                                                                          |
| area, ground line  | <i>See</i> <b>ground line</b>                                                                                                                                                                                                                                                                                                                                                                             |
| <b>arris</b>       | The sharp intersection of two surfaces, e.g. the face and edge of a piece.                                                                                                                                                                                                                                                                                                                                |
| <b>assembly</b>    | Any group of materials or parts including that which has been placed together for bonding or which has been bonded together. In plywood production often a stack of veneers or veneers and core material, and adhesive in a predetermined order ready for bonding into plywood or blockboard. <i>See also</i> <b>lay-up</b> .                                                                             |
| assembly time      | For assembly time—open, closed and total, <i>See</i> <b>time, assembly</b> .                                                                                                                                                                                                                                                                                                                              |
| B-type bond        | <i>See</i> <b>bond type</b>                                                                                                                                                                                                                                                                                                                                                                               |
| <b>back</b>        | <p>(a) The surface of a piece of timber, board, veneer, plywood, blockboard and the like, opposite the face (q.v.).</p> <p>(b) The wide surface of a sleeper, remote from the heart, which is to be laid upwards, and upon which the plates and rails are attached.</p> <p>Where outer veneers of plywood or blockboard are of different grades, the side with the sheet of lower grade is the back.</p>  |
| <b>back bevel</b>  | A surface on the knife back at a slight angle to the main surface, adjacent to and intersecting the knife edge.                                                                                                                                                                                                                                                                                           |
| back off           | <i>See</i> <b>backcut</b>                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>back veneer</b> | Veneer used for the concealed or unfinished surface of plywood.                                                                                                                                                                                                                                                                                                                                           |
| backcut            | <i>See</i> <b>backsawn</b>                                                                                                                                                                                                                                                                                                                                                                                |
| <b>backsawn</b>    | Sawn or cut so that the wide face of the piece is a tangential plane to the growth rings. Trade practice in Australia is to describe timber as backsawn when the average inclination of the growth rings to the wide face is less than 45 degrees, and to describe veneer as backsawn when the growth rings are nominally parallel to the face of the veneer. Also referred to as flat sawn and flat cut. |

|                        |                                                                                                                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>backsawn, fully</b> | Cut so that the average inclination of the growth rings to the wide face is not more than 10 degrees.                                                                                                                                                                                                         |
| balanced construction  | <i>See</i> <b>construction, balanced</b>                                                                                                                                                                                                                                                                      |
| banding                | <i>See</i> <b>edge strip</b>                                                                                                                                                                                                                                                                                  |
| <b>bare cut</b>        | Cut so that the actual dimension is slightly less than the nominal dimension.                                                                                                                                                                                                                                 |
| <b>bark (n)</b>        | The tissues of the trunk and branches of a tree normally outside of the sapwood.                                                                                                                                                                                                                              |
| bark (v)               | <i>See</i> <b>debark</b>                                                                                                                                                                                                                                                                                      |
| <b>bark, included</b>  | Strands of bark tissue enclosed within the wood. <i>See also pocket, bark.</i>                                                                                                                                                                                                                                |
| <b>bark pocket</b>     | A patch of bark partly or wholly enclosed in the wood. Not to be confused with the bark associated with an encased knot.                                                                                                                                                                                      |
| <b>batch</b>           | A quantity of material from which a sample is to be drawn and inspected in compliance with acceptability criteria. Each batch shall consist of material of a single type, grade, class and composition, manufactured under essentially the same conditions at essentially the same time. <i>See also lot.</i> |
| <b>batten</b>          | (a) A piece of sawn or dressed timber of rectangular cross-section used to support roof, ceiling or wall cladding or as a paling in a fence.<br>(b) <i>See</i> <b>strip</b>                                                                                                                                   |
| battenboard            | <i>See</i> <b>blockboard</b>                                                                                                                                                                                                                                                                                  |
| <b>baulk</b>           | A piece of sawn or hewn timber of large rectangular cross-section, usually to a specified size. <i>See also flitch, junk.</i>                                                                                                                                                                                 |
| <b>beat marks</b>      | <i>See</i> <b>marks</b>                                                                                                                                                                                                                                                                                       |
| <b>Bethel process</b>  | (in wood preservation) The impregnation of timber by the full cell process, an initial vacuum being used.                                                                                                                                                                                                     |
| <b>bevel</b>           | <i>See</i> <b>chamfer</b>                                                                                                                                                                                                                                                                                     |
| <b>billet</b>          | A length of log prepared for conversion into veneer. Also referred to as a block or bolt.                                                                                                                                                                                                                     |
| binder                 | (a) <i>See</i> <b>additive and adhesive</b><br>(b) Thin strips of waste timber or other suitable material placed at right angles across packs of timber, at predetermined layer levels, to bind the entire pack together and make it rigid and stable.                                                        |
| <b>bird's eye</b>      | Figure on the backcut or rotary cut surface of timber exhibiting numerous rounded areas resembling small eyes, caused by small depressions of the fibres.                                                                                                                                                     |
| <b>blackheart</b>      | An abnormal black or dark brown discolouration that may occur in the truewood (heartwood) of certain timbers. Not necessarily associated with decay.                                                                                                                                                          |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>bleeding</b>       | <p>(a) (in gluing) The migration of adhesive or a component of adhesive from the glue-line to the surface of the assembly. Such bleeding may leave blemishes on the surface referred to as bleed-through.</p> <p>(b) The exudation of natural gum, oil, resin and the like on the surface of timber.</p> <p>(c) (in wood preservation) The exudation of preservative from treated timber.</p>                                                        |
| <b>blemish</b>        | Anything marring the appearance of timber but not serious enough to be classed as a defect.                                                                                                                                                                                                                                                                                                                                                          |
| <b>blister</b>        | The raising or separation of the surface veneer, overlay or surface treatment from the underlying material due to a faulty bond, but not visible at the edges.                                                                                                                                                                                                                                                                                       |
| block                 | <i>See</i> <b>billet</b>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>blockboard</b>     | <p>A composite board consisting of a core made up of narrow timber strips laid separately or bonded to form a slab to each side of which is bonded one or more veneers or other panel material. <i>See also</i> <b>core stock</b>, <b>solid core</b>.</p> <p>NOTE: If the strips are wider than 30 mm it is sometimes referred to as battenboard; if they are less than 7 mm wide and bonded together it is sometimes referred to as laminboard.</p> |
| block, parquetry      | <i>See</i> <b>flooring, parquetry</b>                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>block, peeler</b>  | A length of log prepared for conversion into veneer by a rotary cutting or a peeling process.                                                                                                                                                                                                                                                                                                                                                        |
| <b>block, sleeper</b> | A short log from which sleepers may be produced.                                                                                                                                                                                                                                                                                                                                                                                                     |
| block flooring        | <i>See</i> <b>flooring, parquetry</b>                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>blooming</b>       | <p>(a) (in wood preservation) The formation of powder or crystals on the surface of treated wood.</p> <p>(b) (in wood finishing) A cloudy discolouration of the finish, usually caused by the presence of excessive moisture in the atmosphere of the finishing rooms.</p>                                                                                                                                                                           |
| <b>blow</b>           | Delamination associated with excessive steam pressure in the panel during hot pressing.                                                                                                                                                                                                                                                                                                                                                              |
| <b>board</b>          | <p>A piece of sawn, hewn or dressed timber of greater width than thickness or a sheet of manufactured material.</p> <p>(a) <b>backing board</b>—That part of the flitch remaining after the available veneer has been removed by slicing. Also referred to as dogwood.</p> <p>(b) building board—<i>See</i> <b>particleboard</b>, <b>fibreboard</b>.</p> <p>(c) chamferboard—A type of weatherboard.</p>                                             |

- (d) clipboard— *See* **particleboard**.
- (e) **fibreboard**—Sheet material manufactured from lignocellulosic fibres with the primary bond deriving from the felting of the fibres and their inherent adhesive properties. Bonding or impregnating agents may be added during manufacture. When heat and pressure are used to cure the adhesive, fibreboard of increased density is produced.
- (f) **hardboard**—A pressed homogenous fibreboard having a typical mean density of 800 kg/m<sup>3</sup> or greater.
- (g) **fibre insulating board**—Fibreboard typically having a mean density not exceeding 350 kg/m<sup>3</sup>, and a mean thermal conductivity not exceeding 0.065 W/m.K.
- (h) **medium density fibreboard**—A generic term for a panel manufactured from wood fibres which are bonded together with synthetic resin or other binder under heat and pressure until cured (the maximum density for MDF is 850 kg per cubic metre).
- (i) **particleboard**—A generic term for a panel manufactured from lignocellulosic materials (usually wood) primarily in the form of discrete particles, flakes, strands or fibres and bonded together with synthetic resin, or other binder, under heat and pressure, until cured.
- (j) **sample board**—A short representative piece of timber placed in a stack of timber so that it can be easily removed for weighing or other testing.
- (k) wallboard— *See* **particleboard**.

bolt

*See* **billet**

**bond (n)**

The attachment of the interface between an adhesive and an adherent. *See also* **adhesion, specific**.

**bond (v)**

To attach materials together by means of an adhesive.

bond line

*See* **glueline**

**bond quality**

The empirical standard scale based on the percentage wood failure used when assessing results of knife, shear and chisel tests. Used to describe the quality of the bond between adjacent veneers or between a veneer and a core.

**bond quality scale**

The empirical scale used when assessing the results of chisel tests (Methods of Test—Bond Quality of Plywood), to establish the quality of the bond between adjacent veneers or between a veneer and a core.

**bond type**

Refers to the durability of the adhesive used in the construction of plywood.

- (a) **type A bond**—Such bond is intended to withstand prolonged exposure to severe exterior conditions without failure of the glue-line. Normally suitable for exposed exterior and structural use.
- (b) **type B bond**—Intended to withstand occasional wetting and drying without delamination occurring.
- (c) **type C bond**—Intended to withstand infrequent wetting and drying without delamination occurring. For interior use.
- (d) **type D bond**—A satisfactory bond for interior use.

**bondwood**

See **plywood, marine plywood**.

**borer**

Wood-boring insect in the larval or adult stage which tunnels into wood or bark.

- (a) ambrosia borer—See (f), **pinhole borer**.
- (b) **anobium borer**—Larva of a beetle of family *Anobiidae*, commonly the species *Anobium punctatum* (furniture borer), which causes damage in some well-seasoned timbers, e.g. in old furniture, panelling and similar. Syn. Furniture borer.
- (c) **auger borer**—Beetle of the family *Bostrychidae* which makes holes in the surface of the wood and whose larvae causes internal damage, mainly in the sapwood of hardwood timbers.
- (d) **lyctus borer**—Larva of the family *Lyctidae*, commonly the species *Lyctus brunneus*, which attacks starchy sapwood of some seasoned or partially seasoned, pored timbers. The adult beetle makes the flight hole. Syn. Powder-post borer.
- (e) **marine borer**—Marine crustaceans such as Limnoria and Sphaeroma or molluscs such as Bankia and Teredo which tunnel into timber submerged in salt or brackish water.

Marine organisms are particularly destructive of wood. While some of them use wood as a food others bore holes in it mainly for shelter and as the wood they destroy does not pass through their digestive system the latter type are difficult to deter even by impregnating the wood with considerable quantities of chemicals.

The severity of attack varies with the temperature of the water, its salinity and the type and concentration of particular organisms found in the locality.

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | <p>(f) <b>pinhole borer</b>—Ambrosia beetle of the family <i>Nansitora</i>, <i>Platypodidae</i> or <i>Scolytidae</i>, which bore ‘pinholes’ in living trees where they cultivate an ambrosia fungus upon which the larvae feed, leaving dark-stains on the perimeter of the tunnels.</p> <p>(g) powder-post borer—<i>See lyctus borer</i>.</p> <p>(h) shot-hole borer—<i>See pinhole borer</i>.</p>                                                                                                                                                                                                                                                                        |
| <b>borer hole</b>                        | A hole caused by wood borer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>borer tunnel</b>                      | A tunnel-like excavation made by a borer. May be packed with material called frass.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>botanical name<br/>(nomenclature)</b> | <p>The scientific name, usually Latin or Greek, given to a plant and based on the biological examination of its flowers, fruits, leaves, cellular structure and habitat.</p> <p>The scientific name consists of a two-name system called the Binomial System, devised by Carolus Linnaeus (1707-1778), whereby plants are classified with the following:</p> <p>(a) <i>Generic name</i>—‘Genus’ (first-name) which classifies plants into genetically related like categories (use a capital for the first letter).</p> <p>(b) <i>Specific name</i>—‘Species’ (second name) which distinguishes one from another, a single kind (use lower case for the first letter).</p> |
| <b>bow</b>                               | A deviation in the longitudinal direction of a piece causing the face to curve away from its intended flat plane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>boxed heart</b>                       | The pith and the adjacent wood contained within the four surfaces of a piece of timber anywhere in its length.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>brashness</b>                         | A condition that causes wood to be relatively low in shock resistance (brittle). When stressed, brashy wood fails abruptly at comparatively small deflections with little or no splintering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>bright</b>                            | <p>(of timber) Free from discolouration, fresh from the saw, timber that has not been exposed to the weather.</p> <p>(of sapwood) Of natural colour or in which stain or discolouration can be removed by surfacing to standard thickness.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>brittle</b>                           | A condition that permits breaking or snapping easily across the grain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>brittleheart</b>                      | Wood characterized by abnormal brittleness caused by growth stresses or fungal attack in the fibres. It is usually located in the heart (q.v.) but may occur elsewhere in the stem.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| brittleness                              | <i>See brashness</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>brush treatment</b>                   | One or more applications of a liquid preservative to the surface of timber by brushing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>brushwood</b>            | Non-eucalypt pored species indigenous to rainforest 'brushes' or 'scrubs' of Eastern Australia. Syn. Scrubwood.                                                                                                                                                                 |
| building board              | <i>See</i> <b>board, particleboard</b> and <b>board, fibreboard</b>                                                                                                                                                                                                             |
| bump                        | <i>See</i> <b>hump</b>                                                                                                                                                                                                                                                          |
| <b>burl</b>                 | A hard woody excrescence or outgrowth on a tree, more or less rounded in form. Can be caused by wounds or abnormal growth. <i>See also</i> <b>figure, burl</b> .                                                                                                                |
| burn, machine               | <i>See</i> <b>marks, pause</b>                                                                                                                                                                                                                                                  |
| burnish                     | <i>See</i> <b>surface, glazed</b>                                                                                                                                                                                                                                               |
| <b>burnishing</b>           | A surface glazing treatment dependent on generation of heat by friction.                                                                                                                                                                                                        |
| <b>burr</b>                 | A protuberance common to certain trees, usually formed by a growth around groups of dormant buds or wounds and viewed as presenting a contorted grain when cut.                                                                                                                 |
| <b>butt</b>                 | The larger or lower end of the stem of a tree, log, pole or post. The larger end of a pile, usually the top when driven.                                                                                                                                                        |
| butt joint                  | <i>See</i> <b>joint</b>                                                                                                                                                                                                                                                         |
| butt matching               | <i>See</i> <b>matching</b>                                                                                                                                                                                                                                                      |
| <b>butt treatment</b>       | Preservative treatment applied, usually by the open tank process or by brushing, to the section of a pole, post or stump which is at or below the ground level.                                                                                                                 |
| C-type bond                 | <i>See</i> <b>bond type</b>                                                                                                                                                                                                                                                     |
| call size                   | <i>See</i> <b>nominal size</b>                                                                                                                                                                                                                                                  |
| <b>camber</b>               | (a) <i>See</i> <b>bow and spring</b><br>(b) Slight curvature built into laminated members to compensate for deflection under load.                                                                                                                                              |
| cant                        | <i>See</i> <b>flitch</b>                                                                                                                                                                                                                                                        |
| <b>carcase (or carcass)</b> | (a) The framing of a structure before the coverings or decorative features are applied.<br>(b) The frame of a piece of furniture.                                                                                                                                               |
| cascade coater              | <i>See</i> <b>curtain coater</b>                                                                                                                                                                                                                                                |
| <b>case</b>                 | (in seasoning) The outer zone of the cross-section of a piece of timber as distinct from the core.                                                                                                                                                                              |
| <b>case compression</b>     | A state of stress in timber when the case is in compression.                                                                                                                                                                                                                    |
| <b>case hardened</b>        | A particular distribution of stresses found in wood after drying. The timber is in a condition where the outer fibres (case) are under compressive stress and the inner fibres (core) are under tensile stress. <i>See also</i> <b>collapse, conditioning, reconditioning</b> . |

NOTE: It is initiated early in the drying process when the wet core restricts the normal shrinkage of the outer fibres as they dry. This leads first to tensile stress and then permanent deformation called set in the outer fibres (tension set) and then to compression stress in the outer fibres as the core begins to dry and shrink. As the drying process continues and the core dries it is restricted from shrinkage by the already set outer fibres and it becomes stressed in tension. If the tension in the core is high, internal checks will occur. Case hardening may be alleviated by an appropriate drying schedule which may include reconditioning.

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>case tension</b>   | A state of stress in timber when the case is in tension.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>catalyst</b>       | An additive that induces or hastens the curing of an adhesive compound. <i>See also</i> <b>hardener</b> , <b>accelerator</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>caul</b>           | Boards, panels or metal sheets that are used in gluing operations to provide uniform distribution of pressure, or used to prevent precure of glue by retarding transfer of heat to plywood having thin face veneers. Also used to support and protect the assembly and to produce special surface characteristics, e.g. high gloss, matt and textured. <i>See also</i> <b>platen</b> .                                                                                                                                                                                  |
| <b>centre</b>         | <i>See</i> <b>core</b> , <b>crossband</b> , <b>longband</b> , <b>runner</b> , <b>underlay</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>chamfer</b>        | The surface produced by the removal of an arris. The resulting surface will replace an original surface in whole or part.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>characteristic</b> | Any natural variation, damage, missing fibre, irregularity or similar occurring in timber or wood products which may affect the appearance, strength, durability or utility of the material in use. They include— <ul style="list-style-type: none"> <li>(a) characteristics intrinsic to tree growth such as knots, gum veins, borer holes, termite galleries and similar; and</li> <li>(b) process related characteristics that may result from sawing, felling, drying and other manufacturing processes such as want, wane, cross fractures and similar.</li> </ul> |
| <b>charge</b>         | The quantity of timber actually processed in one complete cycle of the treating process in a wood preservation or drying plant.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>check</b>          | Separation of the fibres radially across growth rings and along the grain forming a fissure, but not extending through the piece from surface to surface. <ul style="list-style-type: none"> <li>(a) <b>barrel check</b>—A check occurring between the ends of the timber in the round form.</li> <li>(b) cutting check—<i>See</i> (i), <b>peeler check</b>.</li> <li>(c) <b>end check</b>—A check occurring at the end of a piece.</li> </ul>                                                                                                                          |

- (d) **heart check**—A check extending from the pith outwards in any direction but not reaching the surface of the piece.
- (e) **internal check**—A check confined to the interior of a piece.
- (f) knife check—*See* (i), **peeler check**.
- (g) **knot check**—A check occurring in a knot.
- (h) lathe check—*See* (i), **peeler check**.
- (i) **peeler check**—Closely spaced checks on the back of a veneer, usually the surface nearest to the pith of the tree. Caused by bending of the veneer during peeling.
- (j) **radial check**—A check originating on the circumference of a log and extending radially inwards.
- (k) **ray check**—A check occurring along a ray at right angles to the growth rings.
- (l) **seasoning check**—A check caused by seasoning stresses.
- (m) **star check**—A number of adjoining heart checks in the form of a star.
- (n) **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.

For plywood—separation of the fibres along the grain forming a fissure that may extend through the cover ply.

NOTE: Surface checks may appear in the surface of plywood due to drying and shrinkage of the surface relative to the core.

For veneer, surface checks are checks penetrating the face or back veneer, usually due to exposure. *See also* (i) **peeler check**.

#### **chip (v)**

chipboard

chipped grain

#### **chips**

#### **chisel test**

chuck

clamping period

To convert into chips.

*See* **board, particleboard**

*See* **grain, torn**

Small pieces produced from logs or other forms of timber for use in the production of pulp, fibreboard, wood flour, fuel and the like.

A test in which the quality of the bond of plywood is evaluated by estimating the wood failure, after forcible separation of the plies with a suitable sharp tool. *See also* **bond quality, wood failure**.

*See* **dog (n) (c)**

*See* **time, setting**

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| clean                              | <i>See</i> <b>bright</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>clear cutting</b>               | A length of clear timber that can be recovered by cross cutting between knots or other imperfections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>clear length</b>                | The lower part of a tree that is free from branches.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>clear wood</b>                  | In veneer the sheath of wood free of knots formed outside the occluded branch stubs in a turned log. In New Zealand, wood that is free from knots.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>clear wood specimen</b>         | A piece of wood of a specified size, clear of all visible characteristics so that it is of uniformly straight grain, for use in determining mechanical properties. Usually described as a small clear sample.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| clearance angle                    | <i>See</i> <b>knife clearance angle</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>cleat</b>                       | A member nailed across a number of boards to hold them together.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>cleavage</b>                    | The result of splitting.<br><br>NOTE: In timber testing, the cleavage test measures the resistance of the timber to splitting in the radial and tangential planes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>clipper</b>                     | The machine used to cut veneers to width.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| coarse texture                     | <i>See</i> <b>texture</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| coater, cascade                    | <i>See</i> <b>curtain coater</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>collapse</b>                    | Flattening or buckling of wood cells during drying. It is seen on the surface as greater than normal, uneven, or irregular shrinkage. Often called washboarding on the radial surface. Some species are more prone to collapse than others. Internal collapse is characterized by separation of the fibres appearing as internal checking. <i>See also</i> <b>case hardened</b> .                                                                                                                                                                                                                                                                |
| colour matching                    | <i>See</i> <b>matching</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>compound, patching</b>          | A filler of plastic composition, used to repair voids in veneer and plywood.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>compregnated wood (compreg)</b> | Synthetic resin-treated, compressed wood with reduced swelling and shrinking characteristics and increased density and strength properties. <i>See also</i> <b>impreg, improved wood</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>compression failure</b>         | A deformation or fracture of the fibres across the grain resulting from excessive compression parallel to the grain either by direct end compression or bending. It appears as a minute fracture running across the grain, the fibres being crinkled by compression or broken transversely, and is often difficult to detect until the timber is machined. <i>See also</i> <b>fracture, cross</b> .<br><br>NOTE: Natural compression failures may develop in standing trees due to internal stresses set up by wind, snow, unequal growth and similar. They are commonly associated with brittleheart and may occur also as a result of felling. |
| <b>compression wood</b>            | <i>See</i> <b>reaction wood</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>conditioning</b>        | Generally a process carried out during drying of wood. <i>See also</i> <b>reconditioning</b> , <b>case hardened</b> , <b>equalizing</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                            | <ul style="list-style-type: none"> <li>(a) In seasoning, a term loosely used for any process designed to ensure that the moisture content of the timber or wood product meets requirements.</li> <li>(b) In wood preservation, the preliminary treatment of unseasoned or partially seasoned timber for the removal of air and moisture to improve permeability and absorptive properties of the wood. <i>See also</i> <b>case hardened</b>.</li> </ul>                                                                                                                   |
| <b>conifer</b>             | A tree belonging to the order <i>coniferae</i> , of the botanical group <i>Gymnospermae</i> , bearing cones and needle-shaped or scale-like leaves, usually evergreen and producing timber known commercially as 'softwood'. <i>See also</i> <b>softwood</b> .                                                                                                                                                                                                                                                                                                            |
| <b>connection</b>          | The whole of the assembly joining two or more pieces together including the wood on which the fasteners or connectors act. <i>See also</i> <b>joint</b> .                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>consignment</b>         | A quantity of sheets or panels delivered at one time. The consignment may consist of one or more batches or parts of batches. <i>See also</i> <b>lot</b> .                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>construction</b>        | The general arrangement of plies in plywood. <ul style="list-style-type: none"> <li>(a) <b>balanced</b>—A construction such that the forces induced by uniformly distributed changes in moisture will not cause warpage. In plywood, usually a construction in which the plies on one side of the centre-ply or core are essentially equal in thickness, grain direction, properties and arrangement to those on the corresponding other side of the core.</li> <li>(b) <b>laminated</b>—A construction in which the grain direction of all plies is parallel.</li> </ul> |
| <b>controlled property</b> | A characteristic property which is controlled by periodic and continuous monitoring to ensure that it does not drift away from the value initially established by in-grade testing.                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>core</b>                | <ul style="list-style-type: none"> <li>(a) The central ply or plies in a plywood sheet. <i>See also</i> <b>longband</b>.</li> <li>(b) The inner layer of blockboard.</li> <li>(c) (in rotary veneering) The portion of the peeler block remaining after available veneer has been cut.</li> <li>(d) (in timber seasoning) The inner portion of the cross-section of a piece of timber.</li> <li>(e) The solid or skeleton construction of a flush door.</li> </ul>                                                                                                        |
| coreboard                  | <i>See</i> <b>blockboard</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>core compression</b> | A state of stress in timber in which the core is in compression. <i>See also</i> <b>case hardened</b> .                                                                                                                                                                                                                              |
| <b>core gap</b>         | A split or similar void in a plywood panel. Applies to a core and is visible on an edge or end. Also referred to as a core aperture or core void.                                                                                                                                                                                    |
| core moisture content   | <i>See</i> <b>moisture content, core</b>                                                                                                                                                                                                                                                                                             |
| <b>core, peeler</b>     | That part of the billet remaining after all available veneer has been peeled.                                                                                                                                                                                                                                                        |
| <b>core plate</b>       | A slab made up of strips of timber bonded or otherwise held together.                                                                                                                                                                                                                                                                |
| core, solid             | <i>See</i> <b>blockboard</b>                                                                                                                                                                                                                                                                                                         |
| <b>core stock</b>       | Blockboard prepared for finishing with face veneers.                                                                                                                                                                                                                                                                                 |
| <b>core strip</b>       | One of the timber components that makes up the core plate.                                                                                                                                                                                                                                                                           |
| <b>core tension</b>     | A state of stress in timber in which the core is in tension. <i>See also</i> <b>case hardened</b> .                                                                                                                                                                                                                                  |
| <b>corewood</b>         | Wood adjacent to or including the pith, that is of density less than 80 percent that of the density of mature trees.<br><br>NOTE: For plantation grown softwoods, corewood is all the material within a radius of 50 mm from the centre of the growth rings.                                                                         |
| <b>covers</b>           | The external plies of a sheet of plywood. Also referred to as cover veneer. <i>See also</i> <b>back, face, veneers, cover</b> .                                                                                                                                                                                                      |
| <b>cover width</b>      | (of milled products) The actual width that will become the surface when a milled product is fixed into position.                                                                                                                                                                                                                     |
| <b>crazing</b>          | Fine cracks which occur as a network on or under the surface of an adhesive surface coating or overlay.                                                                                                                                                                                                                              |
| <b>creep</b>            | Increase of deformation following prolonged loading.                                                                                                                                                                                                                                                                                 |
| <b>creosote</b>         | A distillate of tar derived from the carbonization of coal.                                                                                                                                                                                                                                                                          |
| <b>crook</b>            | (a) (for round timber) A localized deviation of a piece from straightness in a curve of small radius away from and returning to the overall alignment of the piece.<br>(b) (for sawn timber) Used in New Zealand to denote spring.<br>(c) (for boat building) A naturally curved timber useful for bends and knees in boat building. |
| <b>cross-arm</b>        | A piece of timber of rectangular or square section prepared for attachment to a pole, and generally used for the purpose of carrying wires for telecommunication or electrical service. It can also be of laminated material.                                                                                                        |

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| <b>crossband</b>         | A veneer laid with the direction of grain nominally at right angles to a face ply.                                                                                                                                                                                                                             |
| cross shake              | <i>See</i> <b>compression failure; fracture, cross</b>                                                                                                                                                                                                                                                         |
| <b>crosscut (v)</b>      | To cut across the grain of wood.                                                                                                                                                                                                                                                                               |
| <b>crossfeed splicer</b> | A splicer in which the direction of feed is at right angles to the grain of the veneer. <i>See also</i> <b>splicer</b> .                                                                                                                                                                                       |
| cross grain              | <i>See</i> <b>grain, cross</b>                                                                                                                                                                                                                                                                                 |
| <b>cross-section</b>     | A section at right-angles to the longitudinal axis of the piece. Syn. Transverse section.                                                                                                                                                                                                                      |
| <b>crown cut</b>         | Sliced from a billet with successive veneers all being parallel to the axis of the billet and kept in sequence as cutting progresses across the diameter.                                                                                                                                                      |
| <b>cup</b>               | A deviation at 90° to the longitudinal direction of a piece causing the surface to curve away from its intended flat plane.                                                                                                                                                                                    |
| cup shake                | <i>See</i> <b>shake, ring</b>                                                                                                                                                                                                                                                                                  |
| <b>cure</b>              | The irreversible process of changing the physical properties of an adhesive by chemical reaction to attain the required bond strength. <i>See also</i> <b>set</b> .<br><br>The storage of panel products in block stacks immediately after hot pressing to aid curing can be referred to as post press curing. |
| curl                     | <i>See</i> <b>figure, curl</b>                                                                                                                                                                                                                                                                                 |
| curly grain              | <i>See</i> <b>figure, wavy</b>                                                                                                                                                                                                                                                                                 |
| <b>curtain coater</b>    | A machine for depositing a required amount of liquid adhesive or paint on sheet materials when the material is passed through a controlled, thin, vertical curtain of the liquid. Also referred to as a cascade coater.                                                                                        |
| <b>cut, full</b>         | Cut so that the actual dimension is in excess of the nominal dimension, usually by an allowance for shrinkage expected in service or during seasoning. <i>See</i> <b>oversize</b> .                                                                                                                            |
| <b>cut, neat</b>         | Cut exactly to the dimension specified.                                                                                                                                                                                                                                                                        |
| cut, over                | <i>See</i> <b>cut, full</b>                                                                                                                                                                                                                                                                                    |
| cut, tight               | <i>See</i> <b>tight veneer</b>                                                                                                                                                                                                                                                                                 |
| cut, under               | Cut so that the actual dimension is less than nominal dimension. <i>See also</i> <b>scant</b> .                                                                                                                                                                                                                |
| D-type bond              | <i>See</i> <b>bond type</b>                                                                                                                                                                                                                                                                                    |
| <b>daylight</b>          | The opening between two platens of a press.                                                                                                                                                                                                                                                                    |
| <b>dead timber</b>       | Timber produced from dead standing trees.                                                                                                                                                                                                                                                                      |
| <b>decay</b>             | Decomposition of wood by fungi. Sometimes referred to as doze. <i>See also</i> <b>rot</b> .                                                                                                                                                                                                                    |
| <b>decay, incipient</b>  | The early stages of decay in which disintegration has not proceeded far enough to soften or destroy the structure of the wood perceptibly.                                                                                                                                                                     |