

Australian Standard®

Scaffold planks

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Australian Chamber of Commerce and Industry
Department of Employment, Vocational Training and Industrial Relations, Qld
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PREFACE

This Standard was prepared by the Standards Australia Committee on Scaffolding to supersede and amalgamate AS 1577—1974, *Solid timber scaffold planks* and AS 1578—1974, *Laminated timber scaffold planks*.

This edition incorporates the following major changes from the old editions:

- (a) The inclusion of requirements for metal scaffold planks.
- (b) The inclusion of performance requirements.
- (c) The Section on laminated timber planks incorporates the following principal changes from AS 1578—1974:
 - (i) The provisions are brought into line with AS 1328, *Glue-laminated structural timber*.
 - (ii) Tests are given for the joints.
 - (iii) Introduction of hardwood.
- (d) The Section on solid timber planks incorporates the following principal changes from AS 1577—1974:
 - (i) References to F11 and F17 stress grades have been deleted.
 - (ii) Limitations on twist, end splits, bow and spring have been amended.
 - (iii) Deletion of 30 mm minimum thickness planks.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Scaffold planks

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for the design, manufacture and performance of scaffold planks.

The Standard does not apply to prefabricated platforms (see AS 1576.3).

NOTE: Alternative methods for determining compliance with this Standard are given in Appendix E.

1.2 APPLICATION The performance of scaffold planks shall comply with [Section 2](#), and the manufacture shall comply with [Sections 3, 4 and 5](#) as follows:

- (a) Solid timber scaffold planks [Section 3](#).
- (b) Vertically laminated timber scaffold planks [Section 4](#).
- (c) Metal scaffold planks [Section 5](#).

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
1080	Methods of testing timber
1080.1	Part 1: Moisture content
1199	Sampling procedures and tables for inspection by attributes
1250	SAA Steel Structures Code
1328	Glue-laminated structural timber
1397	Steel sheet and strip—Hot-dipped zinc-coated or aluminium/zinc coated
1399	Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1444	Wrought alloy steels—Standard and hardenability (H) series
1538	Cold-formed Steel Structures Code
1554	SAA Structural Steel Welding Code
1576	Scaffolding
1576.3	Part 3: Prefabricated and tube-and-coupler scaffolding
1576.3 Suppl	Part 3: Supplement 1: Prefabricated and tube-and-coupler scaffolding—Metal tube-and-coupler scaffolding—Deemed to comply
1594	Hot-rolled steel flat products
1604	Timber—Preservative-treated—Sawn and round
1650	Hot-dipped galvanized coatings on ferrous articles
1664	SAA Aluminium Structures Code
1665	Welding of aluminium structures
1728	Types of timber surfaces

AS	
1734	Aluminium and aluminium alloys—Flat sheet, coiled sheet and plate
1748	Mechanically stress-graded timber
1749	Rules for mechanical stress grading of timber
1866	Aluminium and aluminium alloys—Extruded rod, bar, solid and hollow shapes
1874	Aluminium and aluminium alloys—Ingots and castings
2878	Timbers—Classification into strength groups
3678	Structural steel—Hot rolled plates, floorplates and slabs
3679	Structural steel
3679.1	Part 1: Hot-rolled bars and sections
3900	Quality systems—Guide to selection and use
3900.1	Part 1: Guidelines for selection and use
3904	Quality management and quality system elements
3904.1	Part 1: Guidelines
4100	Steel structures
O1	Glossary of terms used in timber Standards
SAA	
HB18	Guidelines for third-party certification and accreditation
HB18.44	Guide 44—General rules for ISO or IEC international third-party certification schemes for products

1.4 USE OF ALTERNATIVE MATERIALS OR METHODS This Standard does not preclude the use of methods or materials other than those specified, provided that such new methods or materials can be proved, by appropriate performance testing, to be equal to or better than those described herein. Service durability shall be a consideration in assessing the new methods or materials.

1.5 DEFINITIONS For the purpose of this Standard, the definitions given in AS O1, and those below apply.

1.5.1 Bow—a curvature from the plane of the wide face in the direction of length (see Figure 1(a)).

1.5.2 Captive plank—a scaffold plank which is designed and intended to be contained and supported by purpose-designed transoms in such a way as to preclude the possibility of uplift.

1.5.3 Cup—a concave warping in the width direction of the plank (see Figure 1(b)).

1.5.4 Random plank—a scaffold plank of any length which is designed and intended to be simply supported by putlogs and to overhang its end supports.

1.5.5 Scaffold plank—a decking component, other than a prefabricated platform, which is used or intended to be used in the construction of any platform supported by scaffolding.

1.5.6 Sliding—the movement of a plank relative to its supports.

1.5.7 Slip—the movement of an object or person on the surface of the plank.

1.5.8 Spring—a longitudinal curvature of the edge of a plank not affecting the face (see Figure 1(c)).

1.5.9 Twist—a spiral distortion along the length of a piece of plank (see Figure 1(d)).

1.5.10 Uplift—the lifting of one end of a plank when a downward force is applied to the other end of the plank.

1.5.11 Working load limit—the maximum allowable working load on the scaffold plank during use.

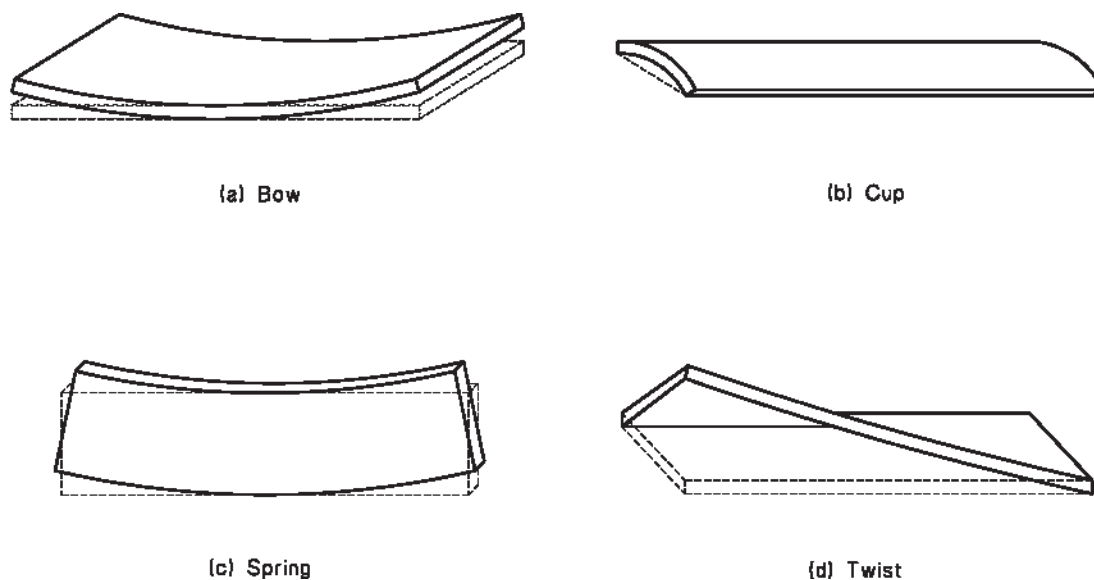


FIGURE 1 BOW, CUP, SPRING, TWIST

1.6 WIDTH OF PLANKS

1.6.1 Minimum width The minimum width of a scaffold plank shall be 220 mm.

For timber planks, the minimum width shall be at a moisture content not exceeding 15 percent. The moisture content shall be measured in accordance with AS 1080.1.

1.6.2 Tolerance on width The tolerance on the width of a scaffold plank shall be -0 , $+5$ mm.

1.7 MANUFACTURING TOLERANCES Except for solid timber scaffold plank which shall comply with [Clause 3.6.2](#), bow and spring shall not exceed 2 mm per metre length of plank. Twist, when measured on the top surface along the edge of the working surfaces, shall not exceed 2 mm per metre length of plank, to a maximum of 8 mm.

1.8 WORKING LOAD LIMIT When supported at the nominated maximum design span, the working load limit in kilonewtons at the midpoint between supports shall be not less than $2b/220$, where b is plank width in millimetres.

1.9 PRINCIPLES OF DESIGN The design of a scaffold plank shall take into account the following:

- (a) The range of environmental conditions and applications in which the scaffold plank is likely to be used.
- (b) The handling normally associated with scaffolding.

- (c) The safety of persons engaged in the erection, alteration and dismantling of the range of scaffolds for which the scaffold plank is intended to be used.
- (d) The safety of persons using the range of scaffolds for which the scaffold plank is intended.
- (e) The safety of persons in the vicinity of the range of scaffolds for which the scaffold plank is intended.

1.10 INFORMATION FROM SUPPLIER The supplier shall provide the following documented information:

- (a) Instructions for transportation, storage and maintenance.
- (b) Guidance on the range of scaffolds for which the plank is suitable.
- (c) In the case of random planks, the manufacturer's recommended maximum span between supports and overhang.
- (d) The nominal weight of the plank.

NOTE: The weight may be critical in relation to dislodgment due to the effect of wind.

- (e) The recommended method of securing the scaffold plank against dislodgment or uplift, if applicable.
- (f) Criteria for rejection or reworking.

1.11 MARKING Each scaffold plank shall be permanently and legibly marked with the following:

- (a) Manufacturer's name or identification.
- (b) The number of this Australian Standard, i.e. AS 1577.
- (c) Working load limit, in kilograms.
- (d) For random planks, the allowable span, in metres.

The marking shall be in a manner to survive the expected life of the plank.

In addition, solid timber scaffold planks shall be branded on an edge with a letter to denote whether it is visually graded (V), or machine-graded (M).

For solid timber planks, the lettering used shall be not less than 25 mm high and the brands shall be spaced not more than 1.8 m apart.

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

SECTION 2 PERFORMANCE REQUIREMENTS

2.1 GENERAL The performance of a scaffold plank shall be verified by testing.

2.2 TESTING

2.2.1 Stiffness test When tested in accordance with [Appendix A](#), the deflection of the plank shall not exceed span/100, to a maximum of 25 mm.

2.2.2 Strength test When tested in accordance with [Appendix B](#), planks shall comply with the following requirements:

- (a) When tested to [Paragraph B4\(a\)](#) to [\(e\)](#), planks shall not show visual signs of distress, buckling or permanent deformation exceeding span/500. In addition timber planks shall not show audible signs of distress.
- (b) When tested to [Paragraph B4\(f\)](#) and [\(g\)](#), the failure load shall be not less than $1.1 F_t$, where F_t is the test load, in kilonewtons.
- (c) The mode of failure shall be to fail progressively and not break into separate parts.

2.2.3 Sliding test When tested in accordance with [Appendix C](#), the force required to produce sliding shall be not less than 250 N.

2.2.4 Slip test When tested in accordance with [Appendix D](#), the plank surface shall have a static coefficient of friction of not less than 0.7.