Australian Standard™

Timber—Methods of test for mechanical fasteners and connectors—Basic working loads and characteristic strengths

Standards Australia

This Australian Standard was prepared by Committee TM-001, Timber Structures. It was approved on behalf of the Council of Standards Australia on 27 April 2001 and published on 19 June 2001.

The following interests are represented on Committee TM-001:

Association of Consulting Engineers Australia

Australian Building Codes Board

Australian Timber Importers Federation

Building Research Association of New South Wales

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Timber—Methods of test for mechanical fasteners and connectors—Basic working loads and characteristic strengths

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-001, Timber Structures, to supersede AS 1649—1998.

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

The objective of this Standard is to provide methods for the determination of basic design information for use in the application of particular mechanical fasteners in timber construction. The Standard also provides procedures for testing jointing systems incorporating mechanical fasteners.

A comprehensive editorial and technical revision of the previous edition has been carried out. In particular, Clauses 2.2.6 and 3.2.5 have been divided into subclauses, to differentiate the methods between timber failure and metal failure. A clause on determination of the characteristic load capacity for fastener that failed in metal under lateral load has been added.

The Standard presumes that before any of the described tests for determining characteristic strengths for a particular fastener are commenced some exploratory testing would be expected, to indicate the likely performance of the fastener and the requirements of the fastener regarding the limiting timber size, edge distance and end distance. The information from the exploratory testing will seldom be precise; therefore, further investigation may be required for the purpose of improving joint efficiency and design information.

Statements expressed in mandatory terms in notes to tables are deemed to be requirement of this Standard.

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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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard defines categories of mechanical fasteners for timber, specifies methods of testing joints incorporating mechanical fasteners and sets out procedures for the determination of basic design information applicable to timber joints in which the fasteners are incorporated.

NOTE: Recommended species for establishing values for joint groups are given in Appendix A.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1391	Methods for tensile testing of metals
1720	Timber structures
1720.1	Part 1: Design methods
2193	Methods for calibration and grading of force-measuring systems of testing machines
1148	Timber—Nomenclature—Australian, New Zealand and imported species
AS/NZS	
1080	Timber—Methods of test
1080.1	Part 1: Moisture content
1080.3	Part 3: Density
1148	Timber—Nomenclature—Australian, New Zealand and imported species

1.3 DEFINITIONS

For the purposes of this Standard, the definitions below apply.

1.3.1 Fastener

A unit fastening device, together with other components that may be required, that enables a sound structural joint to be made between two or more timber members, or between timber and members of other structural materials.