

Australian/New Zealand Standard™

Timber structures

**Part 4: Fire resistance of
timber elements**



AS/NZS 1720.4:2019

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Ministry of Business, Innovation and Employment, New Zealand
New Zealand Timber Industry Federation
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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-010, Timber Structures and Framing, to supersede AS 1720.4—2006, *Timber structures, Part 4: Fire resistance for structural adequacy of timber members*.

The objective of this Standard is to provide a method for determining the fire resistance for structural adequacy and insulation of sawn timber, timber in pole form, plywood, laminated veneer lumber (LVL), and glued-laminated structural timber elements as an alternative to the test method specified in AS 1530.4.

This Standard forms part of the AS 1720 series, as follows:

AS 1720.1, *Timber structures, Part 1: Design methods*

AS 1720.2, *Timber structures, Part 2: Timber properties*

AS 1720.3, *Timber structures, Part 3: Design criteria for timber-framed residential buildings*

AS 1720.4, *Timber structures, Part 4: Fire resistance for structural adequacy of timber elements* (this Standard)

AS 1720.5, *Timber structures, Part 5: Nailplated timber roof trusses*

The terms “normative” and “informative” are used in Standards to define the application of the appendices 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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Part 4: Fire resistance of timber elements

Section 1 Scope and general

1.1 Scope

This Standard provides a method for determining the fire resistance for structural adequacy and insulation of solid sawn timber, timber in pole form, plywood, laminated veneer lumber (LVL), and glued-laminated structural timber elements as an alternative to a standard fire test specified in AS 1530.4 for Australia and New Zealand; and the NZS/BS 476 series and EN 1365 series for New Zealand only.

This Standard also provides methods for protecting metal connectors from the effects of fire.

NOTE 1 This Standard is not relevant to the determination of the early fire hazard properties of materials for which a method of assessment is given in AS/NZS 1530.3.

NOTE 2 The advanced calculation method in [Appendix B](#) provides guidance for an additional method of determining fire resistance.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents for informative purposes are listed in the Bibliography.

AS 1530.4, *Methods for fire tests on building materials, components and structures, Part 4: Fire-resistance test for elements of construction*

AS 1720.1, *Timber structures, Part 1: Design methods*

AS 2082, *Timber — Hardwood — Visually stress-graded for structural purposes*

AS 2858, *Timber — Softwood — Visually stress-graded for structural purposes*

AS 3519, *Timber — Machine proof grading*

AS 3818.3, *Timber — Heavy structural products — Visually graded, Part 3: Piles*

AS 3818.11, *Timber — Heavy structural products — Visually graded, Part 11: Utility poles*

AS/NZS 1170.0, *Structural design actions, Part 0: General principles*

AS/NZS 1328.1, *Glued laminated structural timber, Part 1: Performance requirements and minimum production requirements*

AS/NZS 1748.1, *Timber — Solid — Stress-graded for structural purposes, Part 1: General requirements*

AS/NZS 2269.0, *Plywood — Structural, Part 0: Specifications*

AS/NZS 4063, *Characterization of structural timber (series)*

AS/NZS 4357.0, *Structural laminated veneer lumber, Part 0: Specifications*

NZS 3603, *Timber Structures*

NZS 3631, *New Zealand timber grading rules*