

Australian/New Zealand Standard™

**Composite structures—Composite
steel-concrete construction in buildings**



AS/NZS 2327:2017

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**Composite structures—Composite
steel-concrete construction in buildings**

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Technical Committee BD-032, Composite Construction, to supersede AS 2327.1—2003 *Composite structures, Part 1—Simply supported beams*.

The objective of this Standard is to set out minimum requirements for the design, detailing and construction of composite steel-concrete members (beams, columns, slabs, joints) in buildings. The Standard is to be used by structural engineers when designing steel framed building structures.

This revision incorporates a number of technical and editorial changes, as follows:

- (a) Changes to the strength of concrete, raising the maximum compressive cylinder strength to 100 MPa.
- (b) Changes to the yield strength of steel, raising the maximum tensile yield strength to 690 MPa.
- (c) Provisions for the design of composite slabs using profiled steel sheeting.
- (d) Provisions for the design of composite beams.
- (e) Provisions for the design of composite columns.
- (f) Provisions for the design of composite joints.
- (g) Provisions for system behaviour floor design.
- (h) Provisions for fire design.
- (i) Provisions for earthquake design.

Statements expressed in mandatory terms in Notes to Tables are deemed to be requirements of this Standard.

The terms 'normative' and 'informative' have been used in this Standard 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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Australian/New Zealand Standard**Composite structures—Composite steel-concrete construction in buildings**

SECTION 1 GENERAL

1.1 APPLICATION**1.1.1 Scope**

This Standard sets out minimum requirements for the design, detailing and construction of composite steel-concrete members (beams, columns, slabs, joints) in buildings.

This Standard does not cover the design of composite beams and columns—

- (a) where the elements of the steel section are less than 3 mm thick or the value of the yield stress (f_y) assumed in design exceeds 690 MPa;
- (b) where the concrete characteristic compressive strength at 28 days is outside the range of 20 MPa to 100 MPa; or
- (c) for road or railway bridges (see NOTE).

NOTE: For the design of composite bridge beams, reference should be made to AS/NZS 5100.6 the AUSTRROADS Bridge Design Code.

1.1.2 Normative references

The following normative documents are referred to in this Standard:

AS

1012	Methods of testing concrete
1012.12.1	Determination of mass per unit volume of hardened concrete—Rapid measuring method
1012.12.2	Determination of mass per unit volume of hardened concrete—Water displacement method
1110	ISO metric hexagon bolts and screws—Product grades A and B (series)
1111	ISO metric hexagon bolts and screws—Product grade C (series)
1112	ISO metric hexagon nuts (series)
1163	Cold-formed structural steel hollow sections
1170	Structural design actions
1170.4	Part 4: Earthquake actions in Australia
1175	Metric screw threads for fasteners
1379	Specification and supply of concrete
1397	Continuous hot-dip metallic coated steel sheet and strip—Coatings of zinc and zinc alloyed with aluminium and magnesium
1530	Methods for fire tests on building materials, components and structures
1530.4	Part 4: Fire-resistance tests for elements of construction
1554	Structural steel welding
1554.2	Part 2: Stud welding (steel studs to steel)
1579	Arc-welded steel pipes and fittings for water and waste-water