

Australian/New Zealand Standard™

**Structural steel—Hot-rolled plates,
floorplates and slabs**



AS/NZS 3678:2016

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee BD-023, Structural Steel. It was approved on behalf of the Council of Standards Australia on 13 January 2016 and on behalf of the Council of Standards New Zealand on 21 January 2016.

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The following are represented on Committee BD-023:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Association
Australian Steel Institute
Austroads
Bureau of Steel Manufacturers of Australia
Business New Zealand
New Zealand Heavy Engineering Research Association
Steel Construction New Zealand
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This Standard was issued in draft form for comment as DR AS/NZS 3678.

Australian/New Zealand Standard

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floorplates and slabs**

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-023, Structural Steel, to supersede AS/NZS 3678:2011.

This Standard incorporates Amendment No. 1 (December 2017). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to specify requirements for manufacturers and suppliers of hot-rolled plates, floorplates and slabs for general structural and engineering applications.

This edition includes the following major changes from the previous edition.

- (a) Requirements for type testing and minimum production testing and inspections have been included in the normative appendix on product conformity.
- (b) Test certificates are required to be available for all products produced to this Standard.
- (c) Labelling requirements have been added to enable products compliant with this Standard to be traceable back to their corresponding test certificate.
- (e) Definitions, clause numbering and layout across the four steel-product Standards AS/NZS 1163, AS/NZS 3678, AS/NZS 3679.1 and AS/NZS 3679.2 are consistent, wherever practicable.
- (f) Additional definitions in Clause 3.
- (g) Notation clause removed as duplicated in document. All notation defined in line.
- (h) Sulfur limits for some Z grades.
- (i) Internal soundness clause added.
- (j) Tensile test dimensions defined.
- (k) Through thickness tested grades down to 12 mm thickness.
- (l) Mechanically tested grades up to 200 mm thickness.
- (m) L0 impact tested grades have been reintroduced.
- (n) 'None' impact designation has been removed.
- (o) Option for zinc coating classification referring to AS/NZS 2312.2, Clause 9.1.

A statement expressed in mandatory terms in a note to a table is deemed to be a 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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Australian/New Zealand Standard
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1 SCOPE

This Standard specifies requirements for the production and supply of hot-rolled structural steel plates and floorplates for mechanically-tested steels, analysis-only steels, and mechanically-tested weathering steels. This Standard also specifies requirements for the production and supply of wide slabs as fully-killed analysis-only steel.

This Standard is intended for general structural and engineering applications. All grades specified in this Standard are suitable for—

- (a) welding in accordance with AS/NZS 1554, Parts 1, 2, 5 and 7; and
- (b) fastening as specified in AS 3990, AS 4100, AS/NZS 4600, AS 5100.6 and NZS 3404.1.

This Standard does not cover the following:

- (i) Steel plates for pressure equipment.
- (ii) Hot-rolled steel flat products.
- (iii) Quenched and tempered plate – structural and pressure vessel steel.

Requirements for product conformity to this Standard are given in Appendix B.

NOTES:

- 1 Guidelines to purchasers on requirements that should be specified by the purchaser and those that should or may be agreed on at the time of enquiry and order are given in Appendix A.
- 2 Guidelines on cold-bending and hot-forming of plate during fabrication are given in Appendix C.

2 NORMATIVE REFERENCES

The following normative documents are referenced in this Standard.

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

- 1391 Metallic materials—Tensile testing at ambient temperature
- 1544 Methods for impact tests on metals
- 1544.2 Part 2: Charpy V-notch
- 1733 Methods for the determination of grain size in metals
- 2700 Numerical values—Rounding and interpretation of limiting values
- 3990 Mechanical equipment—Steelwork
- 4100 Steel structures
- 5100 Bridge design
- 5100.6 Part 6: Steel and composite construction

AS/NZS

- 1050 Methods for the analysis of iron and steel (series)
- 1050.1 Part 1: Sampling iron and steel for chemical analysis
- 1365 Tolerances for flat-rolled steel products