

Australian/New Zealand Standard™

Structural steel

Part 1: Hot-rolled bars and sections



AS/NZS 3679.1:2016

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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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-023, Structural Steel, to supersede AS/NZS 3679.1:2010.

The objective of this Standard is to specify requirements for manufacturers and suppliers of hot-rolled structural steel bars and sections 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 its corresponding test certificate.
- (d) The prescriptive requirement of a rolled in mark on hot rolled sections greater than 150 mm has been replaced by a performance based requirement that provides the same level of permanency in identification.
- (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.

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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Part 1: Hot-rolled bars and sections

1 SCOPE

This Standard specifies the requirements for the production and supply of hot-rolled structural steel bars and sections.

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.

This Standard does not cover the following:

- (i) Structural steel—welded I sections.
- (ii) Carbon steels and carbon-manganese steels—Hot-rolled bars and semi-finished products.
- (iii) Steel reinforcing bars for concrete.

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

NOTES:

- 1 Guidelines for 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 of rounds, flats and squares 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
2706	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