AS/NZS 1594:2025

STANDARDS NEW ZEALAND
TE MANA TAUTĪKANGA O AOTEAROA

STANDARDS Australia

Australian/New Zealand Standard™

Hot-rolled steel flat products

AS/NZS 1594:2025

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The following are represented on Committee BD-023:

Australasian Certification Authority for Reinforcing and Structural Steels
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
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Materials Australia
New Zealand Heavy Engineering Research Association
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Australian/New Zealand Standard™

Hot-rolled steel flat products

Originated as part of AS G2—1945 and AS G33—1971.
Revised and redesignated as AS/NZS 1594:1997.
Previous edition 2002.
Third edition 2025.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-023 Structural Steel, to supersede AS/NZS 1594:2002.

The objective of this document is to ensure that hot-rolled steel plate, floorplate, steel and strip, rolled on a continuous mill meets the needs of users in areas of dimensional tolerances and material requirements.

The major changes in this edition are as follows:

(a) Inclusion of requirements for type testing and production testing.

(b) Inclusion of inspections in Clause B.3.

(c) Inclusion of requirements for test certificates.

(d) Addition of labelling requirements to enable products to be traced to their corresponding test certificate.

(e) General alignment of this document with the other 4 steel product Standards—AS/NZS 1163, AS/NZS 3678, AS/NZS 3679.1 and AS/NZS 3679.2.

(f) Change of grades from 8 mm to 16 mm thickness.

(g) Addition of 450 tensile grade.

(h) Introduction of impact tested grades.

(i) Addition of requirement for elongation results for reporting for structural grade coil or plate, 6mm or greater, to be based on proportional elongation length.

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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1 Scope

This document specifies requirements for hot-rolled steel coil, plate, floorplate, sheet and strip produced from hot-rolled coil.

This document applies to —

(a) analysis-only grades;

(b) structural steel, including steels with enhanced atmospheric corrosion resistance;

(c) formability grade;

(d) extra formability grade;

(e) plate up to 16 mm in thickness and up to 2 000 mm in width; and

(f) slit material provided the parent material has an as-rolled width not less than 600 mm.

For general structural and engineering applications, grades specified in this document are suitable for —

(i) welding as specified in AS/NZS 1554.1, AS/NZS 1554.2, AS/NZS 1554.5 and AS/NZS 1554.7; and

(ii) fastening as specified in AS 3990, AS 4100, AS/NZS 4600, AS 5100.6, AS/NZS 5131 and NZS 3404.1.

This document does not apply to —

(A) steel plates for pressure equipment; or

(B) hot-rolled plates, floorplates and plate not manufactured from hot-rolled coil.

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 referenced for informative purposes are listed in the Bibliography.

AS 1391, *Metallic materials—Tensile testing at ambient temperature*

AS 1544.2, *Methods for impact tests on metals, Part 2: Charpy V-notch*

AS 2706, *Numerical values—Rounding and interpretation of limiting values*

AS 3990, *Mechanical equipment—Steelwork*

AS 4100, *Steel structures*

AS 5100.6, *Bridge design, Part 6: Steel and composite construction*

AS/NZS 1050.1, *Methods for the analysis of iron and steel, Part 1: Sampling iron and steel for chemical analysis*

AS/NZS 1365, *Tolerances for flat-rolled steel products*

AS/NZS 1554.1, *Structural steel welding, Part 1: Welding of steel structures*

AS/NZS 1554.2, *Structural steel welding, Part 2: Stud welding (steel studs to steel)*