

AS/NZS 1594:1997

Australian/New Zealand Standard®

---

**Hot-rolled steel flat products**

---

## **AS/NZS 1594:1997**

---

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MT/1, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 1 August 1997 and on behalf of the Council of Standards New Zealand on 4 August 1997. It was published on 5 November 1997.

---

The following interests are represented on Committee MT/1:

Australasian Railway Association  
Australian Chamber of Commerce and Industry  
Australian Chamber of Manufactures  
Australian Foundry Institute  
Australian Institute of Steel Construction  
Bureau of Steel Manufacturers of Australia  
Institute of Metals and Materials Australasia  
Metal Trades Industry Association of Australia  
Society of Automotive Engineers — Australasia

---

**Review of Standards.** To keep abreast of progress in industry, Joint Australian/New Zealand Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Joint Standards and related publications will be found in the Standards Australia and Standards New Zealand Catalogue of Publications; this information is supplemented each month by the magazines 'The Australian Standard' and 'Standards New Zealand', which subscribing members receive, and which give details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Joint Standards, addressed to the head office of either Standards Australia or Standards New Zealand, are welcomed. Notification of any inaccuracy or ambiguity found in a Joint Australian/New Zealand Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

AS/NZS 1594:1997

Australian/New Zealand Standard<sup>®</sup>

---

## Hot-rolled steel flat products

---

Originated in Australia in part as AS G2—1945.  
Final Australian edition AS 1594—1992.  
Jointly revised and designated AS/NZS 1594:1997.

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA  
1 The Crescent,  
Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND  
Level 10, Radio New Zealand House,  
155 The Terrace,  
Wellington 6001 New Zealand

ISBN 0 7337 1428 5

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT/1, Iron and Steel, at the request of Australian industry, to supersede AS 1594—1992.

This edition incorporates recent changes which have occurred in the hot-rolled flat products area of the Australian and New Zealand steel industry. It includes Amendment No. 1 (1992), and permits the use of micro-alloyed steels.

The objective of this revision is to update the requirements for hot-rolled steel plate, floor plate, sheet and strip, rolled on a continuous mill, in thicknesses up to 16 mm and widths up to 2000 mm.

During this revision the following International Standards were considered:

### ISO

3573:1986	Hot-rolled carbon steel sheet of commercial and drawing qualities
4995:1993	Hot-rolled steel sheet of structural quality
4996:1991	Hot-rolled steel sheet of high yield stress structural quality
5951:1993	Hot-rolled steel sheet of higher yield strength with improved formability
6316:1993	Hot-rolled steel strip of structural quality
6317:1982	Hot-rolled carbon steel strip of commercial and drawing qualities
7452:1984	Hot-rolled structural steel plates—Tolerances on dimensions and shape
9034:1987	Hot-rolled structural steel wide flats—Tolerances on dimensions and shape
10384:1992	Hot-rolled carbon steel sheet for machinery

Australia is a participating member of ISO Subcommittee ISO/TC 17/SC 12 which is responsible for the development of the majority of these Standards.

Australian/New Zealand industry considers that there are considerable advantages in having the requirements for all types of hot-rolled flat steel products in the one 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.

### © Copyright — STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Users of Standards are reminded that copyright subsists in all Standards Australia and Standards New Zealand publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia or Standards New Zealand may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia or Standards New Zealand. Permission may be conditional on an appropriate royalty payment. Australian requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia. New Zealand requests should be directed to Standards New Zealand.

Up to 10 percent of the technical content pages of a Standard may be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia or Standards New Zealand.

Inclusion of copyright material in computer software programs is also permitted without royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia or Standards New Zealand at any time.

## CONTENTS

*Page*

## SECTION 1 SCOPE AND GENERAL

1.1	SCOPE . . . . .	4
1.2	REFERENCED DOCUMENTS . . . . .	4
1.3	DEFINITIONS . . . . .	5
1.4	DESIGNATION OF GRADE . . . . .	6
1.5	ROUNDING OF TEST RESULT VALUES . . . . .	7
1.6	MARKING . . . . .	7

## SECTION 2 MANUFACTURING REQUIREMENTS

2.1	SCOPE . . . . .	8
2.2	STEEL-MAKING PROCESS . . . . .	8
2.3	CHEMICAL COMPOSITION . . . . .	8
2.4	FREEDOM FROM DEFECTS . . . . .	8
2.5	DIMENSIONAL TOLERANCES . . . . .	8

## SECTION 3 MECHANICAL PROPERTY REQUIREMENTS

3.1	SCOPE . . . . .	12
3.2	SELECTION OF TEST SAMPLES . . . . .	12
3.3	PREPARATION OF TEST PIECES . . . . .	12
3.4	TENSILE TEST . . . . .	12
3.5	BEND TEST . . . . .	12
3.6	STRAIN-AGE TENSILE TEST . . . . .	13

## APPENDICES

A	PURCHASING GUIDELINES . . . . .	15
B	MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD . . . . .	17
C	RECOMMENDED MINIMUM INTERNAL RADII OF COLD BENDS IN FORMING . . . . .	19
D	METHOD FOR THE STRAIN-AGE TENSILE TEST . . . . .	20

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-