AS/NZS 4671:2019

Australian/New Zealand Standard™

Steel for the reinforcement of concrete

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This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee BD-084, Steel Reinforcing and Prestressing Materials. It was approved on behalf of the Council of Standards Australia on 26 November 2019 and by the New Zealand Standards Approval Board on 4 December 2019.

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The following are represented on Committee BD-084:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Association
Austroads
Building Industry Federation
Bureau of Steel Manufacturers of Australia
Business New Zealand
Concrete NZ
Concrete Pipe Association of Australasia
Galvanizers Association of Australia
Master Builders Australia
National Precast Concrete Association Australia
Steel Reinforcement Institute of Australia

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Previous edition AS/NZS 4671:2001.
Second edition 2019.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-084, Steel Reinforcing and Prestressing Materials, to supersede AS/NZS 4671:2001, *Steel reinforcing materials*.

The objective of the Standard is to provide materials specifications for steel bars and welded mesh used to reinforce concrete structures that have been designed in accordance with standards such as AS 3600, *Concrete structures*, or NZS 3101.1, *Concrete structures standard*, *Part 1*. This Standard has also been referenced by other design standards.

Differences between this Standard and the 2001 edition are briefly outlined below.

(a) *General* — The title of the Standard has been changed to harmonize with ISO 6935, *Steel for the reinforcement and prestressing of concrete*. Although closely aligned technically with both ISO 6935, *Steel for the reinforcement and prestressing of concrete — Test methods* (series) and ENV 10080, *Steel for the reinforcement of concrete — Weldable ribbed reinforcing steel B500 — Technical delivery conditions for bars, coils and welded fabric*, this Standard continues to be classed as not equivalent to these documents primarily because —

(i) ISO 15630 does not contain specific requirements appropriate for reinforcement for earthquake-resistant structures; and

(ii) consequential differences in both the text and numerical values, although minor in nature, are too numerous.

Minor technical and editorial errors and omissions have been addressed.

Changes proposed by the New Zealand Ministry of Business, Innovation and Employment (MBIE) in 2016, in relation to Class E mesh, have been incorporated where possible.

(b) *Strength grades* — Additional higher strength grades of reinforcing steel with a lower characteristic yield stress up to 750 MPa have been introduced in consultation with design standard committees.

The chemical, mechanical and identification requirements for each standard strength grade have been specified.

(c) *Product conformity* — Product conformity requirements have been extensively redrafted to introduce requirements for type testing, batch conformance and long-term quality. In particular, batch conformance criteria allows for minor deviations outside specified limits provided the long-term quality levels are achieved. The importance of long-term quality is emphasized.

The Standard requires that testing is conducted by laboratories in accordance with AS ISO 17025, *General requirements for the competence of testing and calibration laboratories*.

An optional manufacturer's certificate has been introduced to replace the test report in the previous Appendix B. Minimum requirements for the certificate include long-term quality statements.

Two new appendices have been added. Appendix E provides an explanation of the concept of long-term quality versus batch testing. Appendix F gives a rationale for product conformity and sampling, and discusses appropriate points for sampling decoiled products.

The terms "normative" and "informative" are used in Standards 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.

Contents