

AS/NZS 2465:1999

Reconfirmed 2016

Australian/New Zealand Standard™

**Unified hexagon bolts, screws
and nuts (UNC and UNF threads)**

AS/NZS 2465:1999

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME/29, Fasteners. It was approved on behalf of the Council of Standards Australia on 16 November 1998 and on behalf of the Council of Standards New Zealand on 16 November 1998. It was published on 5 February 1999.

The following interests are represented on Committee ME/29:

Australian Building Codes Board
Australian Chamber of Commerce and Industry
Australian Industry Group
Bureau of Steel Manufacturers of Australia
Electricity Supply Association of Australia
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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION
OF
AS/NZS 2465:1999
Unified hexagon bolts, screws and nuts (UNC and UNF threads)

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Technical Committee ME-029 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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NOTES

Australian/New Zealand Standard™

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/29, Fasteners to supersede AS 2465—1981.

The objective of this Standard is to provide manufacturers and purchasers with requirements for hexagon nuts and bolts with full sized shanks and screws with unified screw threads (UNC and UNF) in diameters of 1/4 in to 1 1/2 in inclusive. The objective of this revision is to update the content in respect of references and current editorial policy, and to issue it as a Joint Australian/New Zealand Standard.

Minor technical changes have been incorporated in this revision to ensure that it is in alignment with SAE J429—1983, *Mechanical and material requirements for externally threaded fasteners*, SAE J995—1979, *Mechanical and material requirements for steel nuts* and ANSI B18.2.1—1981, *Square and hex bolts and screws—Inch series* and ANSI B18.2.2—1987, *Square and hex nuts (inch series)*.

The requirements for strength grade 2 bolts and screws been deleted as there is little demand for these products in Australia and New Zealand.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Unified hexagon bolts, screws and nuts (UNC and UNF threads)**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for hexagon nuts and bolts with full-sized shanks and screws with unified screw threads (UNC and UNF) in diameters of 1/4 in to 1 1/2 in inclusive in strength grades 5 and 8.

The Standard is intended primarily to cover steel bolts, screws and nuts used within the temperature range of -50°C to $+300^{\circ}\text{C}$, and does not make provision for products requiring special properties such as weldability or corrosion resistance.

The dimensional and marking requirements (except strength grade marking) of this Standard may also be applied to hexagon nonferrous and stainless steel bolts, screws and nuts.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

3635 Unified (ISO inch) screw threads, associated gauges, and gauging practice

SAA/SANZ

HB18 Guidelines for third-party certification and accreditation

HB18.22 Guide 22: Information on manufacturers' declaration of conformity with standards or other technical specifications

ANSI

B18.2.1 Square and hex bolts and screws—Inch series

SAE

J429 Mechanical and material requirements for externally threaded fasteners

J995

Mechanical and material requirements for steel nuts

1.3 DEFINITIONS For the purpose of this Standard the definitions below apply.

1.3.1 Concentricity tolerance (of a bolt)—the allowable deviation of the shank with respect to the pitch diameter of the screw thread.

1.3.2 Length

1.3.2.1 Nominal length (of a hexagon bolt or screw) (l)—the distance from the bearing surface of the head to the extreme end of the shank including any chamfer or radius.

1.3.2.2 Thread length (on hexagon bolts) (b)—the difference between the nominal length of the bolt and the length of unthreaded shank.

1.3.3 Symmetry tolerance

1.3.3.1 Bolt—the allowable deviation of the across-flats dimension with respect to the shank of the bolt.

1.3.3.2 Nut—the allowable deviation of the across-flats dimension with respect to the screw thread of the nut.