

AS 1589 — 1979  
UDC 696.14 : 669.3

# Australian Standard 1589—1979

1987

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## **COPPER AND COPPER BASED ALLOY FITTINGS**

**FOR USE IN SANITARY PLUMBING  
INSTALLATIONS**

STANDARDS ASSOCIATION  
OF AUSTRALIA  
— 6 — 1979  
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**THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were represented on the committee entrusted with the preparation of this standard:**

Confederation of Australian Industry

Copper and Brass Information Centre

Department of Housing and Construction

Department of Public Works, N.S.W.

Hobart City Council

Local Government Department, Queensland

Water Sewerage and Drainage Authorities

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In order to keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

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AUSTRALIAN STANDARD SPECIFICATION

**COPPER AND  
COPPER BASED  
ALLOY FITTINGS  
FOR USE IN SANITARY  
PLUMBING INSTALLATIONS**

**AS 1589 — 1979**

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## PREFACE

This revision of AS 1589 — 1973 was prepared by the Association's Committee on Sanitary Plumbing Fittings. It incorporates amendments 1 and 2 previously issued and certain other changes relating to soil wastes dump point connections designed for acceptance of soil waste from sanitary fixtures in mobile installations.

The standard covers requirements for materials, design and construction of cast, hot pressed and tubular fittings. It is intended to cover functional aspects only and to provide a basic design, the essential features of which will apply irrespective of material used in construction.

Injury to children's fingers has resulted from their being caught in circular hole gratings. As a safety measure, such gratings have been excluded from the standard.

This standard may require reference to the following standards:

- AS 1000 The International System of Units (SI) and Its Application
- AS 1167 Alloy Filler Rods for Brazing
- AS 1199 Sampling Procedures and Tables for Inspection by Attributes
- AS 1432 Copper Tubes for Water, Gas and Sanitation
- AS 1565 Copper Alloy Ingots and Copper and Copper Alloy Castings
- AS 1567 Wrought Copper and Copper Alloy Rods and Sections for General Engineering Purposes
- AS 1568 Copper and Copper Alloy Forging Stock and Forgings for General Engineering Purposes
- AS 1572 Seamless Copper and Copper Alloy Tube for General Engineering Purposes
- AS 1722 Pipe Threads of Whitworth Form  
Part 2—Fastening Pipe Threads\*
- AS B47 Parallel Screw Threads of Whitworth Form

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\* Publication of AS 1722, Part 2, Fastening Pipe Threads, which is the metric conversion of and supersedes AS B154, has rationalized tolerances and has necessitated the introduction of new Not-Go gauges for internal threads to provide an interim changeover period while the new gauges are introduced. The tolerance for 'normal' class internal threads as detailed in Appendix E (which has been extracted from AS B154) will be permitted for products other than export items; the threads of these items must comply with AS 1722, Part 2.

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard Specification**  
**for**  
**COPPER AND COPPER BASED ALLOY FITTINGS**  
**FOR USE IN SANITARY PLUMBING INSTALLATIONS**

**SECTION 1. SCOPE AND GENERAL REQUIREMENTS**

**1.1 SCOPE.** This specification applies to copper and copper based alloy fittings for use in sanitary plumbing installations. It includes specific requirements for materials, wall thicknesses, screw threads and length of engagement, radii of bends, sockets for brazing, angles of junctions, outlet angle and depth of water seal of traps.

**1.2 APPLICATION.** The fittings shall comply with the applicable requirements of Section 2, and with the specific requirements of the following Sections, as appropriate:

Section 3—Cast and Hot Pressed Fittings

Section 4—Tubular Fittings

Section 5—Standard Components of Fittings

**NOTES:**

1. A typical range of sanitary fittings and components is shown in Appendix A.
2. Sewerage authorities require that the designs of sanitary plumbing fittings for which standard designs are not specified be approved by them before such fittings are used in installations under their jurisdiction. It is therefore most desirable that manufacturers submit to the sewerage authorities concerned the proposed design of any fitting not listed in Appendix A, before commencing its manufacture.
3. Tolerances provided in Fig. 9 allow for difficulty in gauging and ovality due to behaviour of the material during manufacture. Tolerances are for silver brazed joints and are not designed as capillary joints. It is recommended that joints having maximum gap should not be made with the socket facing downward.

**1.3 DEFINITIONS.** For the purpose of this specification, the following definitions apply:

**1.3.1 Capillary Fitting**—any fitting in which the joint is made by the application of heat to cause the flow of filler metal by capillarity along the annular space between the outside of the tube and the inside of the socket of the fitting.

**1.3.2 Fitting**—any component other than pipes or fixtures intended for connection to or installation in a pipeline, e.g. bend, connector, junction, trap, collar, socket, straight fitting, tap or valve.

**1.3.2.1 Right-hand fitting**—a bend or junction such that, when the body of the fitting is viewed with the outlet end downwards and with the inspection opening facing the observer, the socket of the bend or junction projects to the right.