

1994
ED.



**Standards
Association of
Australia**



Australian Standard® 1589—1987

COPPER AND COPPER ALLOY WASTE FITTINGS

STANDARDS ASSOCIATION
OF AUSTRALIA
15 JAN 1988
MELBOURNE LIBRARY

AS 1589—1994
Copper and copper alloy waste fittings
(In Professional Packages 61A, 61B) 38pp H
Specifies requirements for copper and copper alloy waste fittings for use in plumbing installations and includes traps, gullies, waste outlets, gratings and connectors.
(WS/2). Supersedes AS 1589—1987.
DR 93143. Publication date 1994-08-22.

This Australian Standard was prepared by Committee WS/2, Sanitary Plumbing Fittings. It was approved on behalf of the Council of the Standards Association of Australia on 16 November 1987 and published on 1 December 1987.

The following interests are represented on Committee WS/2:

Confederation of Australian Industry
Department of Local Government, Queensland
Department of Administrative Services—Construction Group
Engineering and Water Supply Department, South Australia
Hobart City Council
Metal Trades Industry Association of Australia
Melbourne and Metropolitan Board of Works
Public Works Department, New South Wales
Royal Australian Institute of Architects
Water Authority of Western Australia
Water Board, N.S.W.

Review of Australian Standards. To keep abreast of progress in industry, Australian 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 SAA publications will be found in the Catalogue of SAA Publications; this information is supplemented each month by SAA's journal 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

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

This Standard was issued in draft form for comment as DR 85359.

AUSTRALIAN STANDARD

COPPER AND COPPER ALLOY WASTE FITTINGS

AS 1589—1987

First published as AS B38	1931
Second edition	1934
Revised and redesignated AS A74	1952
Second edition	1969
Revised and redesignated AS 1589	1973
Second edition	1979
Third edition	1987

**PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.**

ISBN 0 7262 4781 2

PREFACE

This Standard was prepared by the Association's Committee on Sanitary Plumbing Fittings, to supersede AS 1589—1979, Copper and Copper Based Alloy Fittings for Use in Sanitary Plumbing Installations.

This Standard differs from AS 1589—1979 in that additional information is included on the functional aspects and basic designs of waste traps and gullies, waste outlets and gratings, and waste connectors. Emphasis has been placed on dezincification, and the concept of performance testing has been introduced which will enable fittings to be evaluated as being fit for purpose. All references to non-pressure capillary fittings have been transferred to a new Standard which is in the course of preparation. Special fitting designs such as 'pop up' wastes, telescopic and swivel connectors, etc are not included.

Criteria for impregnation methods on fittings affected by porosity or pitting will be included at a later date.

© Copyright — STANDARDS ASSOCIATION OF AUSTRALIA 1987

Users of Standards are reminded that copyright subsists in all SAA publications. Except where the Copyright Act otherwise allows, no part of this publication may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing of the Standards Association of Australia. Requests for permission should be directed to the Head Office of the Association. Where such requests relate to the reproduction of the whole or a substantial part of any Standard, permission may be conditional on an appropriate royalty payment.

CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL	
1.1 SCOPE	5
1.2 APPLICATION	5
1.3 REFERENCED DOCUMENTS	5
1.4 DEFINITIONS	5
1.5 DESIGN	6
1.6 MATERIALS	6
1.7 CONNECTION ENDS	6
1.8 INTERMEDIATE JOINTS	12
1.9 THREAD FORMS	12
1.10 WALL THICKNESS	12
1.11 PLATING	13
1.12 FREEDOM FROM DEFECTS	13
1.13 TEST REQUIREMENTS	13
1.14 SPACE FOR STAMPING	13
1.15 MARKING	14
SECTION 2. COPPER AND COPPER ALLOY WASTE TRAPS AND GULLIES	
2.1 GENERAL	15
2.2 DESIGNATION OF SIZE	15
2.3 TRAPS AND GULLIES	15
2.4 CONNECTION ENDS	15
2.5 INSPECTION OPENINGS	15
2.6 TEST REQUIREMENTS	16
SECTION 3. COPPER AND COPPER ALLOY WASTE OUTLETS AND GRATINGS	
3.1 GENERAL	18
3.2 DESIGNATION OF SIZE	18
3.3 GRATINGS	18
3.4 WASTE OUTLET BODIES	18
3.5 CONNECTION ENDS	18
3.6 TEST REQUIREMENTS	18
3.7 MARKING	19
SECTION 4. COPPER AND COPPER ALLOY WASTE CONNECTORS	
4.1 GENERAL	21
4.2 FOOD WASTE DISPOSAL CONNECTORS	21
4.3 PAN CONNECTORS	21
4.4 DOUBLE BOWL CONNECTORS	22
4.5 SUDS SAVER BYPASS	22
4.6 CAPS AND LININGS	22
4.7 SOIL WASTE DUMP POINT CONNECTORS	22
4.8 TUBE BUSHES	22
4.9 TEST REQUIREMENTS	24
APPENDICES	
A METHOD FOR DETERMINING DIMENSIONS	25
B METHOD FOR STRENGTH TEST	27
C METHOD FOR TORQUE TEST	28
D METHOD FOR PRESSURE TEST	31
E METHOD FOR AIR/VACUUM TEST	32

	<i>Page</i>
F METHOD FOR TRAP WATER SEAL TEST	33
G METHOD FOR LOAD TEST	34
H METHOD FOR SEAL TEST	35
J METHOD FOR PRESSURE TEST OF PAN CONNECTOR WASTE FITTINGS	36
K LIST OF REFERENCED DOCUMENTS	37

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

COPPER AND COPPER ALLOY WASTE FITTINGS

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies requirements for copper and copper alloy waste fittings (hereinafter referred to as fittings) for use in plumbing installations and includes traps, gullies, waste outlets, gratings, and connectors.

1.2 APPLICATION. Copper and copper alloy waste fittings shall comply with the requirements of Section 1 and with the following sections, as appropriate:

Section 2—Copper and Copper Alloy Waste Traps and Gullies.

Section 3—Copper and Copper Alloy Waste Outlets and Gratings.

Section 4—Copper and Copper Alloy Waste Connectors.

1.3 REFERENCED DOCUMENTS. Referenced documents are listed in Appendix K.

1.4 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

NOTE: Where definitions in this Standard also appear in AS 1355 (with different wording), the definitions in this Standard take precedence over those in AS 1355. In the next edition of AS 1355, the definitions as given in this Standard will be incorporated.

1.4.1 Bottle trap—a trap in which the seal is maintained by a concealed membrane.

1.4.2 Capillary fitting—a fitting in which the joint is made by the flow of filler metal by capillarity along the annular space between the outside of the tube and the inside of the socket.

1.4.3 Combination trap—a trap with a swivel joint to facilitate use as an 'S' trap or 'P' trap.

1.4.4 Compression joint (non-manipulative type)—a joint which is made by means of a loose compression ring(s) which grips the outside wall of a pipe when the coupling nut is tightened.

1.4.5 Connector—a fitting used to convey liquids from a fixture to discharge pipework.

1.4.6 Depth of water seal—the vertical distance measured between the dip and the weir of a trap. (See Figure 1.1.)

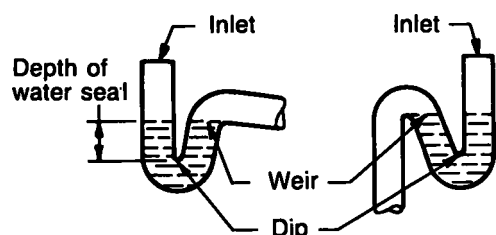


FIGURE 1.1. TYPICAL TRAPS

1.4.7 Dip—the lowest point of the internal surface of a trap at which the water seal is commenced. (See Figure 1.1.)

1.4.8 Fabricated fitting—a fitting built up by joining together a number of components.

1.4.9 Fitting—a device for use in pipework for connecting the pipes either into each other or to a component part of the system.

1.4.10 Grating—framework of parallel or crossed bars or a plate having holes or slots to prevent ingress of large solids.

1.4.11 Gully—a tube trap for use in providing a separation between waste discharges and the remainder of a drainage system.

1.4.12 Disconnecter gully—a gully comprising a riser pipe and inlet fitting to provide disconnection between waste discharges and the remainder of the sewerage installation.

1.4.13 Floor-waste gully—a disconnecter gully located inside the building provided with a floor grate or waste outlet fitting and with provision where required for connection of waste pipes from fixtures.

1.4.14 Inspection opening (IO)—an opening with removable cover in the body of a fitting for the purpose of providing access into pipework for inspection.

1.4.15 Loose coupling nut—a nut retained to the fitting by means of a shoulder and capable of turning relative to the fitting.

1.4.16 'P' trap—a trap in which, when the inlet leg is vertical, the outlet leg is inclined below the horizontal within the limits specified herein.

1.4.17 Quality control test—a test performed during or after manufacture to prove the quality of a production run of fittings.

1.4.18 'S' trap—a trap in which the outlet leg is parallel to the inlet leg within the limits specified herein.

1.4.19 Soil connector—a fitting which conveys soil liquid from a fixture to discharge pipework.

1.4.20 Trap—a fitting designed to retain a water seal for the purpose of preventing the passage of gases. (See Figure 1.1.)

1.4.21 Tube trap—a trap in which the seal is maintained without the use of an internal membrane.

1.4.22 Type test—a test intended to prove the suitability and performance of a new material, a new manufacturing or processing technique, or a new design or size of joint or fitting. Type tests are generally performed when a change is made in material composition or method of manufacture.