WMTS-482:2016
Soil waste dump fitting

WaterMark Technical Specification

2016

ABCB

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ATS 5200.482 – 2006 Technical Specification for Plumbing and Drainage Products
Soil waste dump fitting

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IMPORTANT NOTICE AND DISCLAIMER

On 25 February 2013 management and administration of the WaterMark Certification Scheme transferred to the Australian Building Codes Board (ABCB). From this date all new technical specifications will be named WaterMark Technical Specifications (WMTS). Within two years all existing ATS will be renamed WMTS. During this initial period both terms may be used and accepted. All new and recertified Certificates of Conformity will reference WMTS. Certificates of Conformity that currently reference ATS will be re-issued referencing the equivalent WMTS during this initial period. The WaterMark Schedule of Specifications lists all current WMTS and, where appropriate, the former ATS name.

This Technical Specification supersedes Standards Australia ATS 5200.482–2006.

The rebranding of this Technical Specification has included additional information about the transition as well as changes to specific details including replacing references to Standards Australia and the National Plumbing Regulators Forum (NPRF) with the ABCB, changing the term Australian Technical Specification (ATS) to WaterMark Technical Specification (WMTS), replacing references to technical committees WS-014 and WS-031 with the WaterMark Technical Advisory Committee (WMTAC).

While the ABCB, the participating Governments and other groups or individuals who have endorsed or been involved in the development of the WMTS, have made every effort to ensure the information contained in this document is accurate and up to date, such information does in no way constitute the provision of professional advice.

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Users should seek appropriate independent professional advice prior to relying on, or entering into any commitment based on material in this document in relation to plumbing or related activities. Its interpretation in no way overrides the approvals processes in any jurisdiction.

The ABCB welcomes suggestions for improvement in the WMTS, and encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact the ABCB via phone on 1300 134 631, email at watermark@abcb.gov.au or write to the WaterMark Administering Body, ABCB, GPO Box 9839, Canberra ACT 2601.

PREFACE

WaterMark Technical Specification WMTS-482:2016 Technical Specification for plumbing and drainage products, Soil waste dump fitting was originally prepared by the Joint Standards Australia/Standards New Zealand Committee WS-031, Technical Procedures for Plumbing and Drainage Products Certification as ATS 5200.482–2006.

The objective of this Technical Specification is to enable product certification in accordance with the requirements of the Plumbing Code of Australia (PCA).

The word 'VOID' set against a clause indicates that the clause is not used in this Technical Specification. The inclusion of this word allows a common use clause numbering system for the WaterMark Technical Specifications.

The term 'normative' has been used in this Technical Specification to define the application of the appendices to which they apply. A 'normative' appendix is an integral part of a Technical Specification.

The test protocol and information in this Technical Specification was arranged by committee members to meet the authorization requirements given in the PCA.

The WaterMark Schedule of Specifications and List of Exempt Products are dynamic lists and change on a regular basis. Based on this function, these lists have been removed from the WaterMark Certification Scheme document known as Technical Specification for Plumbing and Drainage Products and are now located on the ABCB website (www.abcb.gov.au). These lists will be version controlled with appropriate historic references.

ACKNOWLEDGEMENTS

Australian Technical Specification ATS 5200.482–2006, on which this technical specification is based, was prepared by Standards Australia Committee WS-031, Technical Procedures for Plumbing and Drainage Products Certification. It was approved on behalf of the Council of Standards Australia on 6 June 2006.

The following organisations were represented on Committee WS-031 in the preparation of Australian Technical Specification ATS 5200.482–2006.

- AUSTAP
- Australian Electrical and Electronic Manufacturers Association
- Australian Industry Group
- Australian Stainless Steel Development Association
- Building Officials Institute of New Zealand
- Building Research Association of New Zealand
- Certification Interests (Australia)
- Copper Development Centre – Australia
- Master Plumbers, Gasfitters and Drainlayers New Zealand
- National Fire Industry Association
- Plastics Industry Pipe Association of Australia
- Plumbing Industry Commission
- South Australian Water Corporation
- Water Services Association of Australia

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1 SCOPE

This Technical Specification sets out requirements for a DN 80 or DN 100 plastics-bodied fitting that is utilized as soil waste dump point for mobile toilet waste disposal.

The fitting covered by this Technical Specification is intended to satisfy the requirements identified in AS/NZS 3500.2.

2 APPLICATION

This Technical Specification will be referenced on the WaterMark Certification Scheme Schedule of Specifications.

Appendix A sets out the means by which compliance with the Specification shall be demonstrated by a manufacturer for the purpose of product certification.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Technical Specification:

AS

1349 Bourdon tube pressure and vacuum gauges

1432 Copper tubes for plumbing, gasfitting and drainage applications

1565 Copper and copper alloys—Ingots and castings

1572 Copper and copper alloys—Seamless tubes for engineering purposes

1589 Copper and copper alloy waste fittings

1646 Elastomeric seals for waterworks purposes

1646.1 Part 1: General requirements

1646.2 Part 2: Material requirements for pipe joint seals used in water and wastewater applications—Specifies by prescription formulation

1646.3 Part 3: Material requirements for pipe joints seals used in water and wastewater applications with the exception of natural rubber and polyisoprene compounds

1646.4 Part 4: Material requirements for pipe joint seals used in water and wastewater applications—Thermoplastic elastomers and vulcanizates

2136 Method for detecting the susceptibility of copper and its alloys to stress corrosion cracking using the mercurous nitrate test

2345 Dezincification resistance of copper alloys

2738 Copper and copper alloys—Compositions and designations of refinery products, wrought products, ingots and castings

2887 Plastic waste fittings

AS/NZS

1260 PVC-U pipes and fittings for drain, waste and vent application

1567 Copper and copper alloys—Wrought rods, bars and sections

1568 Copper and copper alloys—Forging stock and forgings

3500 Plumbing and drainage

3500.0 Part 0: Glossary of terms

3500.2 Part 2: Sanitary plumbing and drainage

4 DEFINITIONS

For the purpose of this Technical Specification, the definitions given in AS/NZS 3500.0 apply.

5 MATERIALS

5.1 General

This Clause specifies requirements for materials utilized in the construction of the product.

5.2 Metallic materials

Metallic materials in contact with water shall be corrosion resistant. For the purposes of this Technical Specification, the following materials are considered to be suitable.

(a) Copper, as specified in Clause 5.2.2.

(b) Copper alloy, as specified in Clause 5.2.3 and 5.2.4.

(c) Stainless steel, as specified in Clause 5.2.5.

5.2.2 *Copper*

Copper shall comply with the following:

(a) *Wrought products* AS 2738.

(b) *Tubular components* Copper tube shall comply with AS 1432.

5.2.3 *Copper alloy*

Copper alloy shall comply with the following:

(a) *Castings* AS 1565 or capable of passing the requirements of Clause 5.3 provided the alloy contains not less than 58% copper and not more than 1% aluminium.

(b) *Hot pressings* AS/NZS 1568.

(c) *Rod for machined parts* AS/NZS 1567 or an alloy complying with AS 2345.

(d) *Tubular components* Copper alloy tube shall comply with AS 1572 alloy designation C26130. Where bent or stamped in the fabrication process, the tube shall be sufficiently stress-relieved so that it is capable of passing the mercurous nitrate test specified in AS 2136 after all fabrication processes are complete.

5.2.4 *Dezincification-resistant (DR) copper alloy*

Copper alloys in contact with water shall comply with AS 2345.

5.2.5 *Stainless steel*

Stainless steel shall be grade 304 or 316 complying with the relevant ASTM Standard for the product form.

5.3 Plastics materials

5.3.1 *General*

Plastics materials shall comply with the relevant Standard for the product type or type of plastics used.

5.3.1.1 *UV Resistance.*

For outdoor applications, the plastics material formulation shall be stabilized by suitable ultraviolet light stabilizers.

5.4 Elastomeric Materials

The materials used for seals or gaskets shall comply with AS 1646.1 and AS 1646.2 or AS 1646.3 or AS 1646.4.

6 MARKING

Each fitting shall be permanently and legibly marked with the following:

(a) Manufacturer's name, brand or trademark.

(b) WaterMark.

(c) Licence number.

(d) The number of this Technical Specification, i.e., WMTS-482.

NOTE: Where space is limited, the number of this Technical Specification may be in abbreviated form, i.e., S482.

7 PACKAGING

The fitting shall be packaged in such a manner so as to avoid damage during transportation and handling.

8 DESIGN

8.1 Drainage

The base of fitting shall allow free flow to the drain with a grade of at least 1 in 60.

8.2 Drain orifice

The drain orifice shall allow insertion of a hose of up to 150 mm outside diameter.

8.3 Integral plumbing components, accessories or fittings

Where the product includes integral plumbing components, accessories or fittings that require certification as identified in the PCA, they shall comply with the applicable requirements of the specification for that product, as identified in Procedure for Certification of Plumbing & Drainage Products.

8.4 End connectors

The outlet connection end shall be either DN 80 or DN 100 and comply with the requirements of the Australian Standard (AS) or WaterMark Technical Specification (WMTS) relevant to the connection.

8.5 Water seal

If the fitting includes an integral waste trap, the water seal shall comply with AS 1589 or AS 2887 and perform in accordance with AS/NZS 3500.2.

9 PERFORMANCE REQUIREMENTS AND TEST METHODS

9.1 Hydrostatic strength test

When tested in accordance with Appendix B at a test pressure of 10 kPa, the device assembly shall not leak, no pressure loss be detected and no deformation occur after the test period.

10 VOID

11 PRODUCT DOCUMENTATION

11.1 Product data

Product data that identifies critical product characteristics, such as the following, shall be available:

(a) Waste discharge flow rate, temperature and required size of piping.

(b) Maximum allowable operating pressure and temperature.

(c) Minimum operating pressure.

11.2 Installation and maintenance instructions

11.2.1 *Installation instructions*

Installation instructions that give full details of tank installation procedures shall be available. The instructions shall include the following:

(a) References to AS/NZS 3500.2 where applicable.

(b) Step-by-step instruction.

(c) The need for special tools or training.

(d) Commissioning procedures and adjustments required.

(e) Troubleshooting guide.

(f) Contact details for after-sales service.

11.2.2 *Operating and maintenance instructions*

Operating and maintenance instructions shall be provided, which shall include the following:

(a) Any regular maintenance requirements.

(b) Spare-parts information.

(c) Troubleshooting guide.

(d) Contact details for after-sales service.

Appendix A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS TECHNICAL SPECIFICATION

(Normative)

A.1 SCOPE

This Appendix sets out the means by which compliance with this Technical Specification can be demonstrated by a manufacturer under the WaterMark Certification Scheme.

A.2 RELEVANCE

The long-term performance of plumbing systems is critical to the durability of building infrastructure, protection of public health and safety, and protection of the environment.

A.3 PRODUCT CERTIFICATION

The purpose of product certification is to provide independent assurance of the claim by the manufacturer that products comply with this Technical Specification.

The certification scheme serves to indicate that the products consistently conform to the requirements of this Technical Specification.

The frequency of the sampling and testing plan as detailed in Paragraph A5, shall be used by the WaterMark Conformity Assessment Body. Where a batch release testing program is required it shall be carried out by the manufacturer as detailed in Paragraph A5 and Table A2.

A.4 DEFINITIONS

A.4.1 Type test batch

Schedule of units of the same type, identical dimensional characteristics, all the same nominal diameter and wall thickness, from the same compound. The batch is defined by the manufacturer.

A.4.2 Sample

One or more units of product drawn from a batch, selected at random without regard to quality.

NOTE: The number of units of product in the sample is the sample size.

A.4.3 Sampling plan

A specific plan, which indicates the number of units of components or assemblies to be inspected.

A.4.4 Type testing

Testing performed to demonstrate that the material, component, joint or assembly is capable of conforming to the requirements given in the Technical Specification.

A.5 TESTING

A.5.1 Type testing

Table A1 sets out the requirements for type testing and frequency of re-verification.

A.5.2 Batch release resting

Table A2 sets out the minimum sampling and testing frequency plan for a manufacturer to demonstrate compliance of product(s) to this Technical Specification on an ongoing basis. However where the manufacturer can demonstrate adequate process control to the WaterMark Conformity Assessment Body, the frequency of the sampling and testing nominated by the manufacturer's quality plan and/or documented procedures shall take precedence for the purposes of WaterMark product certification.

A.5.3 Retesting

In the event of a batch release test failure, the products within the batch may be retested at a frequency agreed to with the WaterMark Conformity Assessment Body and only those batches found to comply may be claimed and/or marked as complying with this Technical Specification.

Table A1—TYPE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Composition, temper etc.	Review materials parts lists and compliance certificates	At any change in materials specification
Marking	6	Labelling/marking	Review of documentation/physical examination	At any change in design/specification
Packaging	7	Protection from transit damage		
Design	8.1	Drainage	Physical measurement/design review	At any change in design/specification
	8.2	Drain orifice	Physical measurement/design review	
	8.3	Integral plumbing components, accessories or fittings	Applicable specification	
	8.4	End connectors	AS or WMTS relevant to the piping system	
	8.5	Water seal	AS 1589 / AS 2887 / AS 3500.2	
Performance	9.1	Hydrostatic strength test	Appendix B	At any change in materials, formulation or design
Product documentation	11	Product data/installation operation and maintenance instructions	Documentation review	At any change factors that require a change in documentation e.g., amendments to AS/NZS 3500 series of Standards

Table A2— BATCH RELEASE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Composition, temper etc.	Delivery acceptance tests or supplier's quality certificate	Each delivery batch
Marking	6	Marking	Visual examination	100%
Performance	9.1	Hydrostatic strength test	Appendix B	Once per batch

Appendix B HYDROSTATIC STRENGTH TEST

(Normative)

B.1 SCOPE

This Appendix sets out the method for determining the seal and structural integrity of a soil waste dump fitting.

B.2 PRINCIPLE

The complete soil waste dump fitting is subjected to a hydrostatic pressure for a predetermined time entrapped air being bled off prior to testing. The device is then inspected for cracks, leaks or any other failure.

B.3 APPARATUS

The following apparatus is required:

(a) Water supply capable of providing the test pressure.

(b) Isolating valve.

(c) A pressure gauge complying with AS 1349 or equivalent and capable of indicating the test pressure ±2% of true value.

(d) Means for connecting the water supply to the fitting to be tested.

B.4 PROCEDURE

The procedure shall be as follows:

(a) Fit the soil waste dump fitting as required by the manufacturer’s instructions.

(b) Plug the outlet.

(c) Open the water supply valve and slowly raise the pressure to the test pressure. Close the water supply valve.

(d) After a minimum of 60 min record the internal pressure.

B.5 TEST REPORT

The following shall be reported:

(a) Manufacturer, model, type and size of soil waste dump fitting.

(b) Test pressure, test time and if a pressure loss has been detected.

(c) Whether leakage or deformation is observed.

(d) Reference to this test method, i.e., WMTS-482, Appendix B.

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