WMTS-526:2018
Flushing sinks

WaterMark Technical Specification

2018

ABCB

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Flushing Sink

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PREFACE

This WaterMark Technical Specification was prepared in accordance with the Manual for the WaterMark Certification Scheme. Appendix 4, Protocol for Developing Product Specifications.

The objective of this WaterMark 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 WaterMark 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 WaterMark Technical Specification to define the application of the appendices to which they apply. A 'normative' appendix is an integral part of a WaterMark Technical Specification.

The test protocol and information in this WaterMark Technical Specification was arranged to meet the authorisation requirements given in the PCA.

The WaterMark Schedule of Products and the WaterMark Schedule of Excluded Products are dynamic lists and change on a regular basis. Based on this function, these schedules are now located on the ABCB website (www.abcb.gov.au). These lists will be version controlled with appropriate historic references.

ACKNOWLEDGEMENTS

WaterMark Technical Specification WMTS-525:2018 was prepared in accordance with the Manual for the WaterMark Certification Scheme, Appendix 4, Protocol for Developing Product Specifications, and was approved by the ABCB on 09 July 2018.

TABLE OF CONTENTS

1 SCOPE

This WaterMark Technical Specification sets out the requirements for a flushing sink with a DN 100 outlet, manufactured from stainless steel incorporating a flushing rim for the discharge of waste to the sanitary drainage system.

NOTE: Flushing sinks covered by this WMTS do not have an integral trap and should be installed in accordance with AS/NZS 3500.2.

This specification shall be read in conjunction with AS 1172.1, AS 1172.2, and AS 1589.

2 APPLICATION

Flushing sinks can be used in commercial or medical facilities for the discharge of waste. The discharge into a flushing sink presents a cross connection risk and to mitigate this risk, a flushing sink shall be installed downstream of an AS 1172.2 compliant flushing device that contains an integral back siphonage mechanism i.e. air break or pipe disconnect.

A flushing sink shall be matched with a flushing device providing a single flush of either 6L or 4.5L, and be certified to AS 1172.2.

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

3 REFERENCED DOCUMENTS

AS

1589	Copper and copper alloy waste fittings
3688	Water supply – Metallic fittings and end connectors

AS/NZS

1172	Water Closets (WC)
1172.1	Part 1: Pans
1172.2	Part 2: Flushing devices
3500.0	Plumbing and Drainage, Part 0: Glossary of terms
3500.1	Plumbing and Drainage, Part 1: Water services
3500.2	Plumbing and Drainage, Part 2: Sanitary plumbing and drainage

ASTM

A240M	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications.

NCC

PCA Plumbing Code of Australia

4 DEFINITIONS

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

4.1 Flushing sink

A sink with integral flushing rim connected to a flushing device to provide carriage of waste to the sanitary drainage system.

5 MATERIALS

Stainless steel used in the construction of a flushing sink shall comply with the Material requirements of stainless steel in AS 1172.1 including thickness, surface finish and construction.

Flushing sinks shall be manufactured from stainless steel of Grade 304 or 316, and complying with ASTM A240M.

6 MARKING

Markings to be placed on products shall be permanent and, as a minimum, include the following:

a) Manufacturer's name, brand or trademark.

b) WaterMark.

c) Licence number.

d) Number of the WaterMark Technical Specification, i.e., WMTS 526

e) Nominal flushing volume, e.g. 6L or 4.5L

f) Matched flushing device

7 PACKAGING

Products shall be individually packaged and sealed if necessary to prevent damage and contamination.

8 DESIGN

8.1 Connection Ends

8.1.1 Inlet

A threaded inlet end connection shall be assessed in accordance with AS 3688 for thread form and dimensional conformance. A plain socket inlet connection end for connection of a flush pipe shall be capable of accepting a matching flush pipe supplied with a flushing device. When tested to the performance tests in Clause 9 of this WMTS, the inlet end connection shall not leak.

8.1.2 Outlet

The outlet end connection shall be a nominal DN100 plain spigot conforming with the requirements for Outlet Connection Ends of a WC pan in AS 1172.1.

The design of the fixture shall not obstruct the fitting of a compatible WaterMark certified pan connector over the fixture outlet spigot during installation.

8.2 Waterway

The fixture shall comply with the waterway requirement for pan connectors in AS 1589.

9 PERFORMANCE REQUIREMENTS AND TEST METHODS

9.1 General

When conducting the tests in Clause 9 of this WMTS, references in each test method to a ‘pan’, ‘WC’, or ‘urinal’ shall be omitted and replaced with the term ‘flushing sink’. Any references and subsequent directives regarding a ‘water seal level’ in each test method shall be omitted.

Commercially available pipework connecting the flushing device to the inlet of the flushing sink shall be supplied by the flushing sink manufacturer for testing.

9.2 Leakage and Capacity

When tested, the flushing sink shall conform with the Leakage and Capacity Test in AS 1172.1.

9.3 Splash Test

When tested, the flushing sink shall conform with the Splash Test in AS 1172.1.

9.4 Wetting Test

When tested, the flushing sink shall conform with the Wetting Test in AS 1172.1.

9.5 Discharge Test

9.5.1 General

Commercially available components shall be used to connect the flushing device to the flushing sink, and these components are to be detailed in the test report.

Should any adjustment of pre-set flushing devices be required to achieve a conforming flush when tested with a flushing sink, this adjustment shall be noted in the test report.

9.5.2 Matched set – Flushing device

When tested, the flushing sink shall conform with the Discharge Test in Appendix M of AS 1172.2 as a 'matched set' with the nominated flushing device.

The discharge volume collected at the outlet spigot shall be either 6L or 4.5L, ± 5%.

10 TEST SEQUENCE AND TEST SAMPLE PLAN

10.1 Test Sequence

The recognised test laboratory shall commence testing with the discharge test as outlined in Clause 9.5. Once a satisfactory result has been obtained, the remaining tests can be completed in any order as determined by the recognised test laboratory.

10.2 Test Sample Plan

Test samples are to be selected in accordance with the Manual for the WaterMark Certification Scheme.

A single representative test sample is required to conform with all Design and Performance requirements of this WMTS.

11 PRODUCT DOCUMENTATION

Installation Instructions including the requirements of this Clause shall be supplied with the product:

a) Installation procedures, reflecting the requirements of AS/NZS 3500 series of Standards, including any limitations on the products use.

b) Any adjustment of the flushing device required to achieve a conforming flush as detailed in Clause 9.5.1 above.

c) Commercially available components used to connect the flushing device to the flushing sink shall be detailed in the installation instructions

d) Operating instructions.

e) Maintenance instructions.

f) Product limitations (if applicable).

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 WaterMarkTechnical Specification shall demonstrated by a manufacturer under the WaterMark product 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 WaterMark Technical Specification.

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

The sampling and testing plan, as detailed in Paragraph A5 and Table A1, 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 Batch release test

A test performed by the manufacturer on a batch of components, which has to be satisfactorily completed before the batch can be released.

A.4.2 Production batch

Clearly identifiable collection of units, manufactured consecutively or continuously under the same conditions, using material or compound to the same specification.

A.4.3 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.4.4 Sampling plan

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

A.4.5 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.4.6 Type testing (TT)

Testing performed to demonstrate that the material, component, joint or assembly is capable of conforming to the requirements given in the WaterMarkTechnical 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 testing

Table A2 sets out the minimum sampling and testing frequency plan for a manufacturer to demonstrate compliance of product(s) to this WaterMarkTechnical Specification on an ongoing basis. However, where the manufacturer can demonstrate adequate process control to the certifying 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 WaterMark Technical Specification.

TABLE A1
TYPE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Materials	Review materials parts lists and compliance certificates	At initial certification, and any change in materials specification
Marking	6	Marking	Review product markings and/or labels	At initial certification, and any change to marking requirements
Design	8.1.1	Inlet connection	AS 3688	At initial certification, and any change in design or manufacturing process
	8.1.2	Outlet connection	AS 1172.1	
	8.2	Waterway	AS 1589	
Performance	9.2	Leakage and capacity	AS 1172.1	At initial certification, and any change in design or manufacturing process
	9.3	Splash test	AS 1172.1	
	9.4	Wetting test	AS 1172.1	
	9.5.2	Discharge test - cistern	AS 1172.2	
	9.5.3	Discharge test – flush valve	AS 1172.2	
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation	At initial certification, and any change to installation requirements

TABLE A2
BATCH RELEASE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Materials	Review raw material mill certificates and/or compliance declarations	Once per batch
Marking	6	Marking	Review product markings and/or labels	100%
Design	8.1.1	Inlet connection	AS 3688	At any change in the design
	8.1.2	Outlet connection	AS 1172.1	
	8.2	Waterway	AS 1589	
Performance	9.2	Leakage and capacity	AS 1172.1	At minimum once per year, or at any change in design or manufacturing process
	9.3	Splash test	AS 1172.1	
	9.4	Wetting test	AS 1172.1	
	9.5	Discharge test	AS 1172.2	Once per batch
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation	At any change to installation requirements

TABLE A3

MINIMUM ANNUAL INSPECTION REQUIREMENTS BY CAB

Characteristic	Clause	Requirement	Verification method	Frequency
Materials	5	Materials	Review raw material mill certificates and/or compliance declarations. Thickness evaluation.	Sample from product family, covering all families within 5 year certification cycle
Marking	6	Product marking, use of the WaterMark logo and license number	Visual inspection of marked product, relevant packaging and documentation	
Design	8.1	Connection Ends	Visual, dimensional, thread form evaluation	
	8.2	Waterway	Visual examination	
Performance	9.5	Discharge Test	Verify currency and commercial availability of matched components	
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation	

TABLE A4
RE-EVALUATION TESTING

Characteristic	Clause	Requirement	Test method
Materials	5	Materials	Review materials parts lists and compliance certificates
Design	8.1.1	Inlet connection	Design review
	8.1.2	Outlet connection	Design review
	8.2	Waterway	Design review
Performance	9.2	Leakage and capacity	AS 1172.1
	9.3	Splash test	AS 1172.1
	9.4	Wetting test	AS 1172.1
	9.5	Discharge test	AS 1172.2
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation

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