



WMTS-527:2019

Automatic hand washing stations

WaterMark Technical Specification

2019





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Chief Executive Officer – Australian Building Codes Board
GPO Box 2013
Canberra ACT 2601

Phone 1300 134 631

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

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1 SCOPE

This Technical Specification sets out requirements for automatic hand washing stations connected to the water service and/or sanitary plumbing/drainage system. The automatic hand washing stations can be countertop, wall mounted or installed as a combination unit.

2 APPLICATION

The automatic hand washing stations covered by this WaterMark Technical Specification are intended for automatically mixing water, soap and air for hygienic washing.

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

The following documents are referred to in this Technical Specification;

AS

1646 Elastomeric seals for waterworks purposes

3688 Water supply – Metallic fittings and end connectors

AS/NZS

2845.1 Water supply – Backflow prevention devices, Part 1: Materials, design and performance requirements

3499 Water supply – Flexible hose assemblies

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

3500.4 Plumbing and drainage – Part 4: Heated water services

3718 Water supply – Tapware

4020 Testing of products for use in contact with drinking water

WMTS

030 Solenoid valves

NCC National Construction Code

PCA Plumbing Code of Australia

4 DEFINITIONS

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

4.1 Automatic Hand washing station

A unit which automatically mixes water, soap and air for hygienic hand washing.

5 MATERIALS

5.1 General

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

5.2 Metallic materials

5.2.1 General

Metallic materials in contact with water shall be corrosion resistant.

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: AS 1432.

5.2.3 Copper Alloy

Copper alloy shall comply with the following:

- (a) Castings shall comply with:
 - a. AS 1565; or
 - b. Be capable of passing the requirements of Clause 5.2.4, provided the alloy contains not less than 58% copper and not more than 1% aluminium.
- (b) Rod for machined parts shall comply with:
 - a. AS/NZS 1567; or
 - b. an alloy complying with AS 2345.
- (c) 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-resistance (DR) copper alloy

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

5.2.5 Stainless steel

Stainless steel (SS) utilized in the construction of the automatic hand washing station and in contact with water shall have a Pitting Resistance Equivalent Number (PREN) of 22 or greater.

5.3 Plastics materials

5.3.1 General

Under hydrostatic pressure, plastics components shall be able to demonstrate suitability at the maximum operating pressure and temperature for the intended life of the product.

Note: The longevity of plastics components is dependent upon the long-term performance of the material, operating conditions and applied stresses.

5.3.2 UV resistance

For plastic bodied automatic hand washing stations intended for outdoor installation, the plastic material formulation shall be stabilized by suitable ultraviolet light stabilizers (see Clause 9.4).

5.4 Elastomeric materials

The materials used for seals or gaskets shall comply with the relevant requirements of AS 1646.

6 MARKING

Automatic hand washing stations shall be permanently and legibly marked with the following:

- (a) Manufacturer's name, brand or trademark
- (b) WaterMark
- (c) Licence number
- (d) Batch identification
- (e) Model number
- (f) The number of this Technical Specification, i.e. WMTS 527
- (g) Minimum and maximum water supply pressure
- (h) Where appliance incorporates an integral backflow prevention device complying with the PCA, as follows:
 - (i) This appliance incorporates backflow prevention complying with the PCA
 - (ii) No further backflow protection required for connection to the water supply.
- (i) Hot and cold plumbing connections indicated with an "H" and "C" or a red and blue colour respectively
- (j) Visible to the user - A written warning and/or graphical device clearly indicating that the water supplied contains soap and is not for human consumption.

7 PACKAGING

The product shall be supplied with suitable packaging to prevent damage during transportation.

8 DESIGN

8.1 End connectors

Water service connections shall be capable of making a watertight seal to a fitting end connection complying with AS 3688.

Sanitary plumbing connections shall be capable of making a watertight connection to a waste fitting complying with:

- (a) AS 1589; or
- (b) AS 2887; or
- (c) a sanitary plumbing pipe or fitting complying with AS/NZS 1260.

8.2 Backflow prevention

Automatic hand washing stations shall be supplied with a backflow prevention device of a type required by the PCA.

Backflow prevention devices shall comply with AS/NZS 2845.1.

8.3 Electrical safety

Electrical appliance components shall comply with the relevant requirements of the electrical regulation, where required.

8.4 Finish and workmanship

Finish of tap components shall comply with AS/NZS 3718.

8.5 Integral components or accessories

Where the appliance incorporates integral plumbing accessories, components 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 the WaterMark Schedule of Products.

9 PERFORMANCE CRITERIA AND TEST METHODS

9.1 Materials in contact with drinking water

Materials in contact with drinking water, upstream of and including the backflow prevention device (Clause 8.2) shall comply with AS/NZS 4020.

9.2 Appliance hose connections

Flexible connecting hoses connected to the automatic hand washing station shall comply with AS/NZS 3499.

9.3 Strength of assembly

9.3.1 Hydraulic strength

When tested in accordance with the hydraulic strength test of WMTS 030 (Appendix D), the automatic hand washing station shall show no leaks.

9.3.2 Watertightness

When tested in accordance with the watertightness test of AS/NZS 3718, the automatic hand washing station shall not exhibit leakage or other failure.

9.3.3 Endurance test

When tested in accordance with the endurance test of WMTS 030 (Appendix E), the operating mechanism shall show no leaks when tested to the requirements of an end-of-line draw-off valve.

9.4 Resistance to ultraviolet light exposure (valves with plastics bodies or external plastics components)

When tested in accordance with the ultraviolet light exposure test of WMTS-030 (Appendix B), external plastics components shall not exhibit any cracking, crazing or other failures.

Following the ultraviolet light exposure test, automatic hand washing stations shall be tested in accordance with the requirements of the hydraulic strength test (type test) of Clause 9.3.1.

10 TEST SEQUENCE AND TEST SAMPLE PLAN

Void

11 PRODUCT DOCUMENTATION

11.1 Product data

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

- (a) Drainage requirements including size and position of piping.
- (b) Water supply temperature and pressure limitations.
- (c) Suitability for installation outdoors and any requirements for UV protection.

11.2 Installation instructions

Detailed installation instructions shall be provided, which shall include the following:

- (a) Reference to installation in accordance with the PCA, including the installation of any non-integral backflow prevention device and any limitations on the product.

Note: A material or product that is listed on the WaterMark Product Database and is marked in accordance with the WaterMark Certification Scheme is recognised by authorities having jurisdiction as being authorised for use in a plumbing or drainage installation. This is because the material or product complies with the applicable product specification. The installation of an authorised material or product must meet the requirements of the PCA. Where the PCA does not contain installation requirements applicable to the authorised material or product, acceptance of the installation is at the discretion of the authority having jurisdiction.

- (b) Step-by-step instructions.
- (c) Commissioning procedures and adjustments required.
- (d) Troubleshooting guide.
- (e) 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 WaterMark Technical Specification shall 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 WaterMark Technical Specification.

The WaterMark 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

A 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 WaterMark 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 testing

Table A2 sets out the minimum sampling and testing frequency plan for a manufacturer to demonstrate compliance of product(s) to this WaterMark Technical 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.

A.5.4 Minimum annual inspection requirements

Table A3 sets out the minimum annual inspection requirements to be undertaken.

A.5.5 Re-evaluation testing

Table A4 sets out the requirements for re-evaluation testing.

**TABLE A1
TYPE TESTS**

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Materials	Review materials parts lists and compliance certificates	At any change in materials specification
Marking	6	Marking	Design review	At any change
Design	8.1	End connectors	AS 3688 and/or AS 1589, AS 2887, AS/NZS 1260	At any change in the design
	8.2	Backflow prevention	Design review	
	8.3	Electrical safety	Compliance certificate	
	8.5	Finish and workmanship	AS/NZS 3718	
	8.6	Integral components or accessories	Compliance certificate to applicable specification	
Performance	9.1	Materials in contact with drinking water	AS/NZS 4020	At any change in materials, formulation or design
	9.2	Appliance hose connections	AS/NZS 3499	At any change in design or manufacturing process
	9.3.1	Hydrostatic strength	WMTS 030	
	9.3.2	Watertightness	AS/NZS 3718	
	9.3.3	Endurance test	WMTS 030	
	9.4	Ultraviolet Light Exposure Test	WMTS 030	
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation	At any change to installation requirements

TABLE A2
BATCH RELEASE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5	Composition, temper, etc.	Review materials parts lists and compliance certificates	Once per batch
Marking	6	Marking	Visual examination	100%
Design	8.1	End connection	Visual examination	Once per batch
	8.2	Backflow prevention	Visual examination	Once per batch
	8.5	Finish and workmanship	Visual examination	Once per batch
Performance	9.2	Appliance hose connections	Review materials parts lists and compliance certificates	Once per batch
	9.3.2	Watertightness	AS/NZS 3718	100%
Product documentation	11	Installation instructions	Visual examination	100%

TABLE A3
MINIMUM ANNUAL INSPECTION REQUIREMENTS

Characteristic	Clause	Requirement	Verification Method	Frequency
Materials	5	Composition, temper, etc.	Review materials parts lists and compliance certificates	Once per batch
Marking	6	Marking	Visual examination	100%
Design	8.1	End connection	Visual examination and measurement	Once per batch
	8.2	Backflow prevention	Visual examination	Once per batch
	8.5	Finish and workmanship	Visual examination	Once per batch
Performance	9.2	Appliance hose connections	Review materials parts lists and compliance certificates	Once per batch
	9.3.2	Watertightness	Batch release test reports or visual examination	100%
Product documentation	11	Installation Instructions	Visual examination	100%

TABLE A4
RE-EVALUATION TESTING

Characteristic	Clause	Requirement	Test method
Materials	5	Materials	Review materials parts lists and compliance certificates
Design	8.1	End connection	AS 3688 and/or AS 1589, AS 2887, AS/NZS 1260
	8.2	Backflow prevention	Design review
	8.5	Finish and workmanship	Design review
Performance	9.2	Appliance hose connections	Compliance certificate of AS/NZS 3499
	9.3.2	Watertightness	AS/NZS 3718
Product documentation	11	Product data/Installation and maintenance instructions	Product documentation

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Australian Building Codes Board
GPO Box 2013
Canberra ACT 2601
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