AS 1172.7:2025

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Sanitary plumbing products

Part 7: Waterless and limited flush urinals with integral sealing devices



AS 1172.7:2025

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Plumbing Products Industry Group

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How to read this Standard

This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

(a) "should" means that something is recommended.

(b) "may" means that something is permitted.

(c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

(i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.

(ii) The Scope states what the Standard is about, what it covers and what it does not cover.

(iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.

(iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

(1) A normative appendix sets additional requirements that need to be conformed to.

(2) An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply.

(3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee WS-003, Sanitary Plumbing Fixtures and Fittings.

The objective of this document is to provide manufacturers, importers, suppliers and users with a single document for the design, performance, material, and finish requirements for waterless/limited flush urinals.

This document is now included in the AS 1172 series of sanitary plumbing standards.

This document incorporates and updates criteria from the following WaterMark Technical Standards published by the Australian Building Codes Board:

(a) WMTS-459:2018, *Waterless urinals.*

(b) WMTS-469:2022, *Waterless or limited flush urinals — With an integral sealing device.*

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Sanitary plumbing products

Part 7: Waterless and limited flush urinals with integral sealing devices

Section 1 Scope and general

1.1 Scope

This document specifies requirements for waterless and limited flush urinals.

Waterless and limited flush urinals require no or minimal water for their operation. Their trap seals are achieved by using chemical or mechanical sealing systems.

Waterless and limited flush urinals are typically designed in wall-hung, single stand format. It is not the intention of this document to exclude other unspecified combinations.

This document includes product conformity requirements (see Appendix A).

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document:

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1172.6, *Sanitary plumbing products, Part 6: Flushing urinals*

AS 1976, *Vitreous china used in sanitary appliances*

AS 2001.4.A02, *Methods of test for textiles, Method 4.A02: Colourfastness tests — Grey scale for assessing change in colour*

AS 2845.2, *Water supply — Backflow prevention devices, Part 2: Air gaps and break tanks*

AS 2887, *Plastic waste fittings*

AS 3558.2, *Methods of testing plastics and composite materials sanitary plumbing fixtures, Method 2: Determination of chemical and stain resistance*

AS 3558.3, *Methods of testing plastics and composite materials sanitary plumbing fixtures, Method 3: Determination of colour fastness*

AS 3558.4, *Methods of testing plastics and composite materials sanitary plumbing fixtures, Method 4: Determination of resistance to surface scratching*

AS 3558.6, *Methods of testing plastics and composite materials sanitary plumbing fixtures, Method 6: Visual examination of surface finish for defects*

AS 3558.11, *Methods of testing plastics and composite materials sanitary plumbing fixtures, Method 11: Determination of impact resistance of baths for ablutionary purposes*

AS/NZS 3500.1, *Plumbing and drainage, Part 1: Water services*

AS/NZS 3500.2, *Plumbing and drainage, Part 2: Sanitary plumbing and drainage*

ANSI Z124.9, *Plastic Urinal Fixtures*

ASME A112.19.19, *Vitreous China Nonwater Urinals*

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1.3 Terms and definitions

For the purposes of this document, the terms and definitions given in AS/NZS 3500.0 and those below apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

(a) IEC Electropedia: available at https://www.electropedia.org/

(b) ISO Online browsing platform: available at https://www.iso.org/obp

1.3.1
hybrid urinal
waterless urinal that can dose the connected waste pipework system with water at periodic intervals, and does not use water to flush the surface of the fixture

Note 1 to entry: The purpose of periodic pipework dosing with water is to minimize the build-up of struvite in the waste piping system. Struvite is a magnesium, ammonia, phosphate compound (MAP) which occurs in the form of a scale deposition in wastewater pipes.

1.3.2
may
indicates the existence of an option

1.3.3
shall
indicates that a statement is mandatory

1.3.4
should
indicates a recommendation

1.3.5
waterless urinal
urinal designed to operate without the use of flushing water as the primary means of removing urine from the urinal to the waste system

1.3.6
waterless urinal trap sealing devices

1.3.6.1
chemical seal
device, usually in the form of a cartridge, containing a liquid chemical that permits passage of urine waste and performs an odour-sealing function between a urinal and the waste drainage system

Note 1 to entry: See Figure 1 for typical waterless urinal trap sealing devices.

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1.3.6.2
mechanical seal
device that mechanically, by way of a diaphragm or valve mechanism, permits drainage of urine waste and performs an odour-sealing function between a urinal and the waste drainage system

Note 1 to entry: See Figure 1 for typical waterless urinal trap sealing devices.

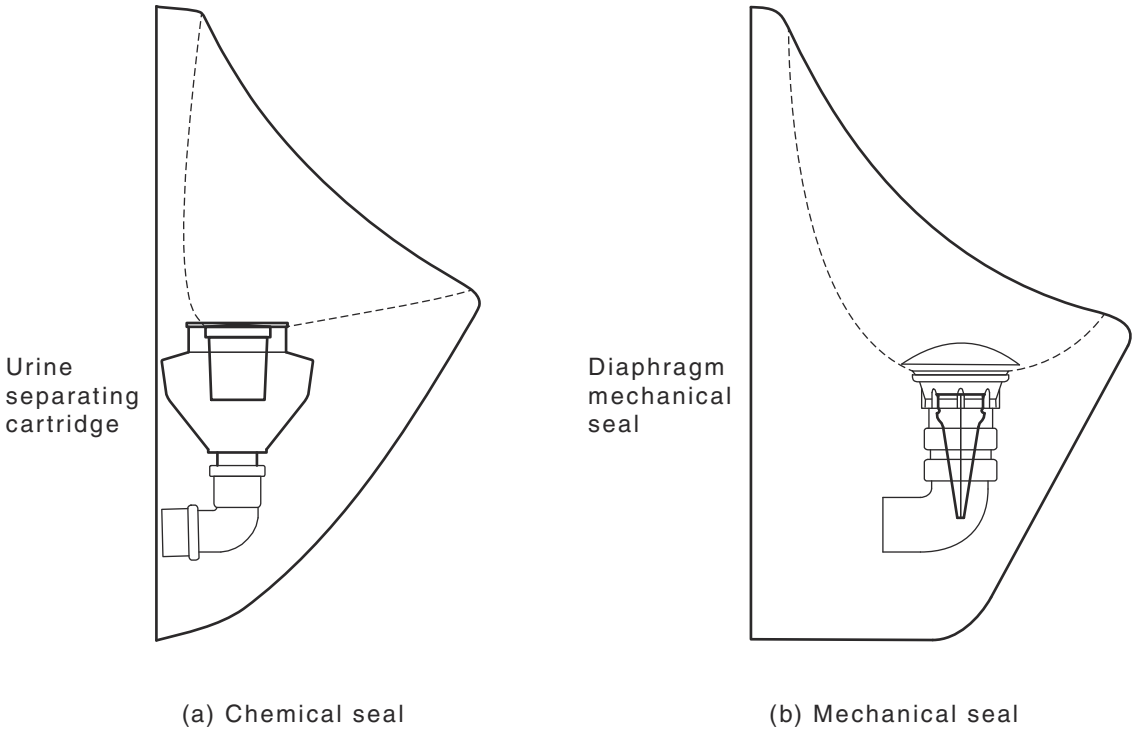


Figure 1 — Typical waterless urinal trap sealing devices

1.4 Materials and finish

1.4.1 Vitreous china

Vitreous china shall conform to AS 1976. The thickness of vitreous china at any point shall be at least 6 mm. All external surfaces visible after installation shall be coated in a contiguous glaze covering. Surface quality shall conform to the defect and blemish requirements of AS 1976.

1.4.2 Stainless steel

Urinals shall be manufactured from stainless steel and have a minimum pitting resistance equivalent number (PREN) of 18.

The PREN can be calculated as follows:

$$\text{PREN} = \%\text{Chromium} + (3.3 \times \%\text{Molybdenum}) + 16 \times (\%\text{Nitrogen})$$

A PREN of 18 is approximately equivalent to Grade 304. A PREN of 23 is approximately equivalent to Grade 316.

The nominal thickness of the stainless steel sheet shall be at least 1.2 mm for slab, trough and stall urinals. Single stall wall-hung urinals shall have a nominal thickness of at least 0.9 mm.

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1.4.3 Plastic and composite

1.4.3.1 Materials

Urinals shall be manufactured from plastic or composite materials that conform to this document or are in accordance with ANSI Z124.9.

Plastic materials include —

(a) thermoplastic resin either unfilled, filled or fibre-reinforced;

(b) thermoset resin-based composite either filled or fibre-reinforced; or

(c) similar impervious, non-porous material.

Material surfaces can be lustrous or non-glossy and —

(i) self-finished;

(ii) pre-coated; or

(iii) post-coated.

Gelcoat resin coating shall be at least 0.4 mm thick.

1.4.3.2 Distortion and defects

When viewed from a distance of 500 mm to 600 mm with a surface illumination of at least 100 Lx, the surface of the urinal shall be without distortion, defects or blemishes. Any doubtful area shall be tested in accordance with AS 3558.6.

1.4.3.3 Chemical and stain resistance test

When sample specimens are tested in accordance with AS 3558.2, the material shall be unaffected by the following reagents:

(a) Household detergent such as “Dobatex” Gold D6515 (5 % by volume solution/deionized water) or equivalent.

(b) Aqueous solution of Urea 6 % (i.e. 60 g of analar grade urea per litre of water).

1.4.3.4 Colourfastness test

When a sample specimen is tested in accordance with AS 3558.3, the material shall not craze, crack or exhibit signs of defect. Change in colour shall not register less than Grade 4 on the grey scale of AS 2001.4.A02.

1.4.3.5 Surface scratching test

When a sample specimen is tested in accordance with AS 3558.4 using a 2H lead, there shall be no indentation or scratching deeper than 0.15 mm. Removable scratches as defined in AS 3558.4 are acceptable.

1.4.3.6 Impact test

A sample specimen shall not crack, craze or show any signs of delamination when tested in accordance with AS 3558.11.

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1.4.4 Vitreous enamelled steel

Urinals shall be —

(a) manufactured from cold-rolled unalloyed low carbon steel with a minimum thickness of 1.5 mm; and

(b) wholly enamelled on the inside and over the exposed rim with vitreous enamel. All other surfaces shall be fully coated with a corrosion-resistant bonding coat.

NOTE Where welding is employed, welding materials should be compatible with the material to be welded. All welds should be finished smooth, without pitting or crevices.

1.5 Instructions

Instructions (in English) shall include the following:

(a) Step-by-step installation procedure.

(b) Reference to installation instructions in accordance with AS/NZS 3500.1 and AS/NZS 3500.2.

NOTE Refer to AS/NZS 3500.2:2025 Clause 13.24.2.3 for installation limitations for undiluted discharge from a urinal.

(c) Operating and servicing instructions including the following:

(i) Cleaning procedure.

(ii) Identification of spare parts and instructions for their replacement.

(iii) Intervals for service and replacement of seals (where necessary).

(iv) Special tool requirements (if necessary).

(v) Other special requirements.

(d) Occupational health and safety precautions.

(e) Hybrid urinals shall include the following statement:

This hybrid urinal has been tested to and has meet the backsiphonage requirement in AS 2845.2:1996. Further zone protection may be required. Please consult with the local regulator for any further cross-connection installation requirements.

1.6 Marking

Each urinal shall be —

(a) marked with the manufacturer’s name or trademark; and

(b) labelled or otherwise marked in a visible location upon installation with the following:

(i) Model identification.

(ii) Batch identification.

(iii) The number of this Australian Standard, i.e. AS 1172.7.

NOTE For WaterMark label specifications, refer to the Manual for the WaterMark Certification scheme.

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