

AS 1172.6:2022



STANDARDS
Australia



Sanitary plumbing products

Part 6: Flushing Urinals



AS 1172.6:2022

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- Association of Accredited Certification Bodies
- Australian Building Codes Board
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Stainless Steel Development Association
- CSIRO
- Department of Climate Change, Energy, the Environment and Water
- Institute of Plumbing Australia
- Plastics Industry Pipe Association of Australia
- Plumbing Products Industry Group

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Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee WS-003, Sanitary Plumbing Fixtures and Fittings, to supersede AS/NZS 3982:1996, *Urinals*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to provide manufacturers, importers, suppliers and users with design, finish and material requirements for flushing urinals.

The major changes in this edition are as follows:

- (a) Inclusion of this Standard in the AS 1172 series of sanitary plumbing standards.
- (b) Removal of prescriptive terminology in the previous Standard.
- (c) Urinals manufactured from vitreous enamelled steel and plastic and composite material have been included.
- (d) Updated descriptions to include current material standards and testing requirements.
- (e) New flushing criteria and testing methods.
- (f) Product conformity requirements are included.

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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NOTES

Australian Standard®

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Section 1 Scope and general

1.1 Scope

This document specifies requirements for flushing urinals of the following types:

- (a) Slab or trough.
- (b) Stall.
- (c) Wall-hung single-stall or pedestal configuration.

1.2 Application

Each urinal shall conform to the design, material and performance requirements relevant to the urinal type and material as specified in this document.

1.3 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:

AS 1172.2, *Sanitary plumbing products, Part 2: Flushing devices and cistern inlet and outlet valves*

AS 1589, *Copper and copper alloy waste fittings*

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 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*

WMTS-040, *Waste pipe connection outlets and gratings, separate or integral, WaterMark Technical Specification*

1.4 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.4.1

batter

permanent outward fall of the walls of a slab or stall urinal to ensure adequate cleansing of walls

1.4.2

box rim

enclosed channel containing water release holes formed around the rim of a stall urinal whose purpose is to correctly distribute flushing water

1.4.3

channel

drain

drainage area with fall to a waste outlet or outlets

1.4.4

component

part or subassembly of parts, which contributes to the construction of a total assembly by choice or design which will offer variations of fitment for the application of the major element of the product, whether produced by that same manufacturer or not

1.4.5

may

indicates the existence of an option

1.4.6

outlet grate

removable raised grating with a raised profile to prevent entry of foreign objects into the waste system

1.4.7

platform grating

grid section of stainless steel or other non-corrosive material positioned over the channel of the urinal

1.4.8

served area

wall or side area or internal bowl area of a urinal that must be washed down during a normal flushing operation

1.4.9

shall

indicates that a statement is mandatory

1.4.10

should

indicates a recommendation

1.4.11

spreader

water outlet component used to distribute flushing water to ensure adequate cleansing of the walls

1.4.12

tiling flange

upstand on one or more sides of a urinal to facilitate a waterproof seal between the urinal and wall

1.4.13

urinal flushing control system

device that controls the release of flushing water that may operate in certain ways

Note 1 to entry: The urinal flushing control system may operate as follows:

- (a) Conscious operation — operated manually by the user.
- (b) Demand-driven operation — operated automatically on demand with an activation sensitivity field at the front of the urinal or a urine sensing device.
- (c) Programmable-demand operation — demand-driven operation with additional configurable functionality to control flushing modes and frequency, based on detected user activity.

1.4.14

water servicing weir

water supply located along the top edge of the urinal wall that is formed to control the release flushing water to wash walls and wall ends

1.5 Materials and finish

1.5.1 Vitreous china

Vitreous china shall conform to AS 1976. The thickness of vitreous china at any point shall be not less than 6 mm. All external surfaces visible after installation shall be coated in a contiguous glaze covering. Surface quality shall conform to the defects and blemishes requirements of AS 1976.

1.5.2 Stainless steel

Urinals shall be manufactured from stainless steel having a PREN rating not less than 16.

The pitting resistance equivalent number (PREN) may be calculated as follows:

$$\text{PREN} = \% \text{Cr} + (3.3 \times \% \text{Mo}) + 16 \times (\% \text{N})$$

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

The nominal thickness of the stainless steel sheet shall be no less than 1.2 mm for slab, trough and stall urinals. Single stall wall-hung urinals shall have a nominal thickness of no less than 0.9 mm.

1.5.3 Plastic and composite

1.5.3.1 Materials

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 may be —

- (i) self-finished;
- (ii) pre-coated; or
- (iii) post-coated.