

Australian Standard[®]

Spa pools

Part 1: Public spas



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The following are represented on Committee CS-059:

- NSW Health Department
- Office of Fair Trading NSW Consumer Protection Agency
- Royal Life Saving Society Australia
- Swimming Pool and Spa Association of NSW
- University of Queensland

Additional Interests:

- Consumers Federation of Australia
-

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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2610.1—2007

Spa pools

Part 1: Public spas

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Technical Committee CS-034 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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Swimming Pool and Spa Association of Australia

NOTES

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PREFACE

This Standard was prepared by the Standards Australia Committee CS-059, Spa Pools, to supersede AS 2610.1—1993.

This Standard incorporates Amendment No. 1 (September 2011). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide designers, specifiers, construction personnel and operators within the industry with information for the installation and operation of spas in order to standardize the industry generally and, in particular, safety aspects associated with spas in Australia

This edition incorporates the following major changes:

- (a) Inclusion of requirements for ventilation and room surface for spa pools installed indoors.
- (b) Amendment of requirements for walkway steps.
- (c) **‘Text deleted’**.
- (d) Inclusion of requirement for the frequency of disposal of waste water.
- (e) Expansion of chemical operational parameters to include free bromine/chlorine and ozone.
- (f) Inclusion of limitations for *Escherichia coli*, coliforms and *Pseudomonas aeruginosa*.

AS 2610.1—1983 will be withdrawn following substantial regulatory implementation of this edition, or within two years of publication of this edition, whichever is the earlier.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

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STANDARDS AUSTRALIA

Australian Standard
Spa pools

Part 1: Public spas

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for the design, construction and operation of public spa pools intended for recreational use, either separately installed or forming part of a swimming pool installation. It is not applicable to spa pools with a capacity of less than 680 L, commonly known as spa baths, in accordance with AS 3861, or to spa pools that are used under the direction of medical personnel, such as hydrotherapy pools, or stationary swimming pools.

The Standard applies only to ‘public spas’, as defined in the Standard. Recommended procedures for operators of public spa pools are given in Appendix C.

NOTE: Private spas are covered by AS 2610.2.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1159 Polyethylene pipes for pressure applications
 - 1668 The use of mechanical ventilation and airconditioning in buildings
 - 1668.2 Part 2: Ventilation design for indoor-air contaminant control
 - 1926 Swimming pool safety
 - 1926.3 Part 3: Water recirculation systems
 - 2700 Colour standards for general purposes
 - 3861 Spa baths
 - 4560 Gas pool heaters
- AS/NZS
- 1477 PVC pipes and fittings for pressure applications
 - 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules)
 - 3500 Plumbing and drainage
 - 3500.1 Part 1: Water services
 - 3518 Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications
 - 60335.2.60 Household and similar electrical appliances-Safety-Particular requirements for whirlpool baths and whirlpool spas

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1.3 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

1.3.1 Abrasion hazard

A sharp or rough surface that would scrape the skin upon chance contact or in normal use.

1.3.2 Air injection system

A system whereby air (only) is forced into hollow ducting built into a spa pool floor, bench or other location, which is activated by a separate air power unit (blower).

1.3.3 Backwash

The process of cleansing the filter media and elements by reverse flow.

1.3.4 Breakpoint chlorination

The destruction of chloramines by superchlorination. Chloramines are determined in the spa pool water as combined chlorine, which is the difference between total chlorine and free chlorine.

1.3.5 Capacity

The volume of water the spa pool contains when measured from the appropriate waterline.

1.3.6 Casual contact

Contact of any body part occurring by chance or during normal use.

1.3.7 Chlorine, combined

Chlorine that has combined with ammonium compounds or organic matter containing nitrogen to form chloramines.

NOTES:

- 1 Ammonium compounds and organic matter containing nitrogen are normally transmitted to pool water by body wastes (e.g., perspiration) and organic contamination (e.g., leaves).
- 2 Bactericidal properties of combined chlorine (i.e. chloramines) are only approximately one hundredth as effective as those of a similar level of free chlorine in water.

1.3.8 Chlorine, free

Chlorine that has not combined with ammonia but is free to kill bacteria and algae and to destroy organic contamination introduced into the pool water.

NOTE: Free chlorine is also known as free available chlorine and free residual chlorine.

1.3.9 Cutting hazard

A sharp edge that would cut the skin upon chance contact or during normal use.

1.3.10 Floor

The bottom interior surface of the spa pool, including that part of the surface from a horizontal plane up to a maximum of 1:12 slope.

1.3.11 Footwell

The spa pool area below the level of the seat.

1.3.12 Jet inlet fittings

A fitting that blends air and water to create a high velocity, turbulent stream of air-enriched water.

1.3.13 Ladder

An appliance consisting of two stiles joined at regular intervals by cross-pieces called rungs or treads, on which a person may rest or step when ascending or descending.

1.3.14 Lining

The material on the inner surface of the spa pool structure in contact with the water.

1.3.15 Niche steps

A series of vertically spaced cavities in the spa pool wall creating tread areas for stepholes.

1.3.16 Outlets

A1 | As defined in AS 1926.3.

1.3.17 Pinching hazard

Any configuration of components that would pinch or entrap the fingers or toes of a child or adult.

A1 | **1.3.18 ‘Text deleted’**

1.3.19 Public spa

A1 | Any spa pool that is designated as a ‘public spa’ by any State Act, Regulation or regulatory body.

1.3.20 Puncture hazard

Any surface or protrusion that would puncture the skin upon chance contact or during normal use.

A1 | **1.3.21 Inlets**

As defined in AS 1926.3.

1.3.22 Sanitizer

A compound or system which, when applied as per instructions to a spa pool, kills algae and harmful microorganisms in order to achieve and maintain an effective level of disinfection in the water.

1.3.23 Spa pool

A water-retaining structure fitted with filtration and sanitizing equipment, a heater, equipment for creating turbulent water and a skimmer system, normally filled with water except for maintenance purposes, and not intended to be used for swimming.

1.3.24 Steps

A tread or series of treads extending down from the surround into the spa pool.

1.3.25 Steps, recessed

A tread or series of treads offset from the spa pool area, with the bottom tread terminating at the spa pool wall, thus creating a stairwell (see Figure 1.1).

A1 | **1.3.26 ‘Text deleted’**

1.3.27 Superchlorination

The addition to spa pool water of two to four times the normal daily dose of chlorine for destruction of combined chlorine (i.e., chloramines) and for treatment of impurities introduced by prolonged use, increased number of users or debris resulting from inclement weather.

1.3.28 Supplier

The person or organization that sells the equipment to the user.

1.3.29 'Text deleted'

1.3.30 Turbidity

Reduction in transparency of a liquid, caused by the presence of undissolved matter.

1.3.31 Turnover

Complete circulation of a volume of water equal to the pool capacity.

1.3.32 Walkways

Those areas surrounding a spa pool that are specifically constructed or installed for access to the spa by bathers.

NOTE: Also known as decks or surrounds.

1.3.33 Wall

That part of the structure that supports the lining in a spa pool. The interior wall surfaces are those surfaces having a slope greater than 1:12.

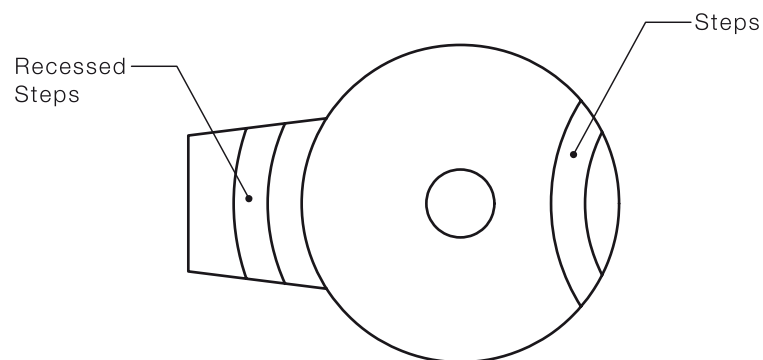


FIGURE 1.1 STEPS

SECTION 2 REQUIREMENTS

2.1 LOCATION

2.1.1 General

Public spa pools shall be located in areas that enable all of the bathing area to be actively supervised, accessed and viewed by those in charge of the operation of the spa pool.

2.1.2 Indoor ventilation

Spa pools installed indoors shall be located only in a room or building that has ventilation. The minimum exhaust ventilation flow rate shall be in accordance with AS 1668.2.

NOTE: Airconditioning and ventilation systems and other services installed in buildings containing spa pools should be designed to take account of the high evaporation and condensation rates, and the fact that the moisture contains chemicals used to treat the spa pool.

2.1.3 Room surface

Ceilings, walls and floor surfaces shall be of a moisture-impervious finish.

2.2 MATERIALS

2.2.1 General

Materials used in the construction and installation of public spa pools, their components and accessories shall be of a durable nature and capable of fulfilling the needs of the design, installation and intended use.

NOTE: Standard swimming pool cement finishes may not necessarily be acceptable for spa pools at elevated temperatures.

2.2.2 Effects of environment

The materials for components and accessories to be used in and around spa pools shall be such that the operational strength of the entire assembly shall not be adversely affected by exposure to rain, snow, ice, sunlight, normal local temperature extremes, normal local wind variations, expected local air pollution products, and the mechanical, electrical and chemical environment in and around spa pools. In particular, adequate protection shall be provided against damage to the structural shell of the spa pool due to freezing.

2.2.3 Toxicity and compatibility

The materials used in the components of spa pools and their accessories shall be such that the assembled and installed spa pool shall not expose the user to any toxic materials under normal conditions of use. The materials used shall be chemically and galvanically compatible with each other and with the intended installation environment.

2.3 STRUCTURAL DESIGN

2.3.1 Installation

The spa pool structural design and the surrounding supporting materials shall provide a sound, durable structure that will safely sustain all the dead loads and live loads, and hydrostatic and earth pressures involved in each case.

2.3.2 Construction

Installation and construction shall be such that the spa pool shall be of a durable nature and capable of fulfilling the needs of design, installation and intended use. The spa pool shall be watertight and the lining shall be non-toxic and easily cleaned.