



Guide to Standards - Pools and Spas

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Introduction

This guide provides information on Standards, Certification and other industry specific information that may be of interest to those within the public and private pools and spas industry including importers, manufacturers, managers and owners.

Disclaimer: The information contained in these pages is provided by way of indicative guidance only and SAI Global Limited does not represent that it is accurate or complete or suitable for any particular specific purposes. The onus remains with users to satisfy themselves of their requirements and needs for their own particular circumstances.

Pool Fences and Gates

Barriers designed to prevent young children entering pools and spas should be manufactured by following the information that is included in [AS 1926.1-2012, Swimming pool safety – Safety barriers for swimming pools](#). This Standard specifies requirements for the design, construction and performance of fences, gates, retaining walls, windows, door sets and balconies intended to form a barrier that will restrict the access of young children to swimming pools.

Information on the options for the location of safety barriers intended to restrict access to swimming pools is included in [AS 1926.2-2007, Swimming pool safety – Location of safety barriers for swimming pools](#). This Standard may be regulated in different ways by State and Territory building regulators.

There is a list of [Regulators, Industry Bodies and Associations](#) and [Local Government Associations](#) located at the end of this guide.

Pool Safety

Ladders and Diving Boards

Ladders and diving boards used with pools and spas should be designed to meet the requirements described in [AS 2818-1993, Guide to swimming pool safety](#). General information on safety and maintenance requirements for pools and spas is also included in this Standard.

Flotation aids used to assist persons with swimming should be tested to the requirements covered in [AS 1900-2002, Flotation aids for water familiarization and swimming tuition](#).

Water safety signs placed near pools and spas should follow the recommendations in:

- [AS/NZS 2416.1:2010, Water safety signs and beach safety flags – Specifications for water safety signs used in workplaces and public areas \(ISO 20712-1:2008, MOD\)](#)
- [AS/NZS 2416.3:2010, Water safety signs and beach safety flags – Guidance for use](#)

Water Slides

Water slides used with public pools can be designed by following the information contained in [AS 4685.3-2004, Playground equipment – Particular safety requirements and test methods for slides](#).

Hazard assessment levels for slides used with private pools can be determined by using the information that is included in [AS/NZS 8124.1:2013, Safety of toys – Safety aspects related to mechanical and physical properties](#).

Imported slides may have been tested to the European Standard [EN 71-1:2011](#).

Amusement Devices

Water related amusement devices may be located in large public pool complexes. The Standard for waterborne inflatable amusement devices is [AS 3533.4.5 \(Int\)-2012, Amusement rides and devices – Specific requirements – Waterborne inflatables](#).

Detailed information on design, construction and risk assessment criteria for all types of amusement devices are included in [AS 3533.1-2009, Amusement rides and devices – Design and construction](#).

Amusement devices should also be inspected and maintained by using the information contained in the Standards listed below:

- [AS 3533.2-2009, Amusement rides and devices – Operation and maintenance](#)
- [AS 3533.3-2003 \(R2013\), Amusement rides and devices – In-service inspection](#).

Building Contracts

Australian building contracts are covered by:

- [AS 2124, General conditions of contract - Annexures Series](#)
- [AS 4000, General conditions of contract Series](#)
- [AS 4300, General conditions of contract for design and construct Series](#)
- [AS 4902, General conditions of contract for design and construct Series](#)

The Australian Standard[®] contract for swimming pools and spas is [AS 2160.1-1998, Contract for the supply and construction of a swimming pool or spa – Concrete swimming pool or spa](#).

Information on our range of options covering these areas is available from www.saiglobal.com/Contracts. In addition, if you require information on contractual terms as set out in a recognised Australian Standard[®] and only need to make minimal amendments in the annexures, you can refer to the [Contracts Catalogue](#).



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Electrical Safety

Electrical equipment used with spas should be installed by following the details that are included in [AS/NZS 3000:2007, Electrical installations \(known as the Australian/New Zealand Wiring Rules\)](#). A table providing information on zoning and ingress protection levels for electrical equipment used with pools and spas is also included in this Standard.

Enclosures housing electrical equipment used with pools and spas should be designed to meet Ingress Protection (IP) tests. IP tests (protection against entry of solid foreign objects, dust, and harmful quantities of water) for these types of products are included in [AS 60529-2004, Degrees of protection provided by enclosures \(IP Code\)](#).

Electrical safety requirements for filtration equipment used with pools and spas are included in [AS/NZS 3136:2001, Approval and test specification – Electrical equipment for spa and swimming pools](#) and [AS/NZS 60335.2.60:2006, Household and similar electrical appliances - Safety - Particular requirements for whirlpool baths and whirlpool spas \(IEC 60335-2-60 Ed 3.1, MOD\)](#).

Plugs, cords, socket outlets and transformers used with pools and spas should be tested to:

- [AS/NZS 3112:2004, Approval and test specification - Plugs and socket-outlets](#)
- [AS/NZS 3191:2008, Electric flexible cords](#)
- [AS/NZS 60227.5:2003, Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Flexible cables \(cords\)](#)
- [AS/NZS 61558.2.6:2009, Safety of power transformers, power supplies, reactors and similar products for supply voltages up to 1 100 V - Particular requirements for safety isolating transformers and power supply units incorporating safety isolating transformers \(IEC 61558-2-6 Ed 2, MOD\)](#)

The [Guide to Standards – Household Electrical Equipment](#) may also be of use for those working with electrical equipment.

Plumbing Fittings

Plumbing products and fittings with swimming pools and spas should be installed by following the information that is included in [AS/NZS 3500.1:2003, Plumbing and drainage – Water services](#) and [AS/NZS 3500.4:2003, Plumbing and drainage – Heated water services](#). These Standards are also available as [AS/NZS 3500 \(Set\):2003, Plumbing and drainage Set](#).

A list of Standards and technical specifications for certification of plumbing and drainage products that are generally intended for installation, replacement, repair, alteration and maintenance by authorised persons is included in [AS 5200.000-2006, Technical specification for plumbing and drainage products – Procedures for certification of plumbing and drainage products](#).



The SAI Global [WaterMark](#) scheme can be used to certify plumbing fittings and products. For more information on this scheme you can refer to the [SAI Global Product Certification Schemes](#) section of this guide or contact the [Product Certification Services Group](#) on the following:
PHONE: +61 2 8206 6322
EMAIL: product@saiglobal.com

Filtration Equipment (Skimmer Boxes)

Filtration equipment, outlet devices and skimmer boxes used with pools and spas should be designed and installed by following the information in [AS 2610.2-2007, Spa pools - Private spas](#) and [AS 1926.3-2010, Swimming pool safety – Water recirculation systems](#).

Diagrams illustrating recommended dimensions for skimmer boxes are also included in [AS 1926.3-2010, Swimming pool safety - water recirculation systems](#). These Standards cover product safety requirements for fittings that are supplied with pools and spas.

Information on details for filtration systems, outlet devices and pumps used with large public pools and spas is included in [HB 241-2002, Water Management for Public Swimming Pools and Spas](#).

Pool Pumps

Pool pumps supplied in Australia and New Zealand should be tested to [AS/NZS 60335.2.41:2004, Household and similar electrical appliances – Safety - - Particular requirements for pumps](#). This Standard is a modified edition of [IEC 60335-2-41 Ed 3.1](#) and [EN 60335-2-41:2003](#).

Information on energy efficiency requirements and performance tests for pool pumps are included in [AS 5102.1-2009, Performance of household electrical appliances – Swimming pool pump-units – Energy consumption and performance](#) and [AS 5102.2-2009, Performance of household electrical appliances – Swimming pool pump-units – Energy labelling and minimum energy performance standard requirements](#).

Marking details for pumps are also included in [AS/NZS 60335.2.41:2004](#) and [AS/NZS 60335.1:2002](#).

Pool and Spa Heaters

Electrical heaters used with pools and spas supplied in Australia and New Zealand should be tested to [AS/NZS 3136:2001, Approval and test specification - Electrical equipment for spa and swimming pools](#). This Standard also includes Electrical safety tests for heaters and marking requirements for heaters. Marking requirements are also included in [AS/NZS 3100:2009, Approval and test specification - General requirements for electrical equipment](#).

Solar Heaters and Collectors

[AS 3634-1989 \(R2013\), Solar heating systems for swimming pools](#) includes information on design, installation and commissioning requirements for the types of collectors listed below:

- Flat Plate Collectors
- Glazed Collectors
- Trickle Collectors
- Panel Collectors
- Piping Collectors
- Strip Collectors
- Unglazed Collectors

Manufacturing tests for solar collectors using rubber and UPVC plastic materials are included in the [AS 2369 \(R2013\), Materials for solar collectors for swimming pool heating Series](#).

Energy efficiency tests for solar collectors used with pools is included in [AS/NZS 2535.1:2007, Test methods for solar collectors – Thermal performance of glazed liquid heating collectors including pressure drop \(ISO 9806-1:1994, MOD\)](#). This Standard is a modified edition of [ISO 9806-1:1994](#).

Information on pool covers is also included in [AS 3634-1989 \(R2013\), Solar heating systems for swimming pools](#).

Chlorinators

Electrical equipment used with pool chlorinators and supplied in Australia and New Zealand should be tested to [AS/NZS 3136:2001, Approval and test specification - Electrical equipment for spa and swimming pools](#).

Marking requirements for chlorinators are also included in [AS/NZS 3136:2001](#) and [AS/NZS 3100:2009, Approval and test specification – General requirements for electrical equipment](#).

Pool Construction

General Information

There are Australian design and construction Standards for above ground and in-ground pools manufactured from concrete and fibre-reinforced plastics.

Concrete Pools

Concrete used with swimming pools should be tested to the requirements that are included in [AS 1379-2001, Specification and supply of concrete](#).

General information on structures manufactured from limit state design engineering principles using different types of precast and reinforced concrete materials is included in [AS 3600-2009, Concrete structures](#). This Standard also includes information on durability requirements for concrete exposed to water.

Pools and Spas manufactured from prestressed or reinforced concrete should follow the details that are described in [AS 3735-2001, Concrete structures for retaining liquids](#).

Pools with a surface area no greater than 100m² and with a length no greater than 15m, can be designed by following the details in [AS 2783-1992, Use of reinforced concrete for small swimming pools](#).

Reinforcing steels (also known as reinforcing fabric) should be manufactured by following the information that is included in [AS/NZS 4671:2001, Steel reinforcing materials](#).

Tilt-up panels used to construct pools and spas should be designed and erected by following the information that is included in [AS 3850-2003, Tilt-up concrete construction](#).

Fibre-Reinforced Plastic Pools

Information on design and installation requirements for pools and spas manufactured from fibre-reinforced plastic materials, with volumes exceeding 7500L and depths greater than 750mm is included in [AS/NZS 1838:1994, Swimming pools – Premoulded fibre-reinforced plastics – Design and fabrication](#).

Safe Work Method Statements (SWMS)

Those responsible for constructing pools may also be required to prepare Safe Work Method Statements. SWMS for persons constructing above-ground and in-ground pools can be prepared by following the information contained in the publications below.

In-Ground Pools

SWMS can be prepared by following the information contained in the publication [S8.1.12.0204, Safe Work Method Statement – Pool construction – Inground](#).

Those responsible for constructing above-ground pools can prepare Safe Work Method Statements by following the information that is included in [S8.1.12.0202, Safe Work Method Statement – Pool construction – Above-ground](#).

Pool Pavers

Concrete and masonry pavers surrounding pools can be constructed by following the information that is included in [AS 3727-1993, Guide to residential pavements](#). This Standard also includes information on recommended compaction and drainage requirements.

Should you require further information on recommended strength requirements for mortars used for masonry pavers, you can follow the information that is included in [AS 4773.2-2010, Masonry in small buildings – Construction](#) or [AS 3700-2011, Masonry structures](#).

Slip resistance levels for pavers around pools can be determined by following the methods that are described in [AS 4586-2013, Slip resistance classification of new pedestrian surface materials](#) and [AS 4663-2013, Slip resistance measurement of existing pedestrian surfaces](#). The term R rating is commonly used to describe slip resistance ratings for different types of surfaces.

Water Quality Levels

Information on recommended chlorination levels for private pools and spas are included in [AS 3633-1989, Private swimming pools – Water quality](#). A table listing properties for different types of water sanitizing products is also included in this Standard.

Information on recommended water quality requirements for public pools and spas is included in [HB 241-2002, Water Management for Public Pools and Spas](#). Detailed information on types of equipment that may be used to determine water quality is also included in this Handbook.

Water quality levels can also be assessed by following the types of tests that are included in the [AS 4276, Water microbiology Series](#).

Storing Chemicals

Large quantities of corrosive substances may be stored by owners and operators of pools and spas. These types of dangerous goods should be stored by following the information that is included in [AS 3780-2008, The storage and handling of corrosive substances](#).

There may also be circumstances where different classes of chemicals (dangerous goods) are stored in the one location. In these types of cases, the storage requirements described in [AS/NZS 3833:2007, The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers](#) can be followed.

Those responsible for storing pool chemicals can prepare Safe Work Methods by using the information that is included in the publication [S8.1.12.0203, Safe Work Methods – Pool Chemicals – Safe handling](#).

More information on storage and handling of chemicals can be found in the [Guide to Standards – Dangerous Goods](#).

Lighting Public Pools and Spas

Information on recommended lighting levels for indoor and outdoor pools and spas is included in [AS 2560.2.5-2007, Sports lighting – Specific applications – Swimming pools](#). This Standard is based on the recommendations that are included in [AS 2560.1-2002, Sport lighting – General principles](#).

[AS 4282-1997, Control for the obtrusive effects of outdoor lighting](#) establishes guidelines for the control of obtrusive effects of outdoor lighting and gives recommended limits for the relevant lighting parameters to contain these effects within tolerable levels.

Floodlights are commonly used to illuminate public swimming pools and spas and information on this can be found in [AS/NZS 60598.2.5:2002, Luminaries – Particular requirements – Floodlights \(IEC 60598.2.5:1998, MOD\)](#). This Standard references the design details and test methods that are included in [AS/NZS 60598.1:2003, Luminaries – General requirements and tests](#).

Underwater lights should be tested to the requirements that are included in [AS/NZS 60598.2.18:1998, Luminaries – Particular requirements – Luminaries for swimming pools and similar applications](#).

Enclosures supplied with underwater lights require high levels of protection against the ingress of water. Information on recommended ingress protection (IP) ratings for pool lights is included in [AS/NZS 3000:2007, Electrical installations \(known as the Australian/New Zealand Wiring Rules\)](#). Ingress protection levels for underwater pool lights are also listed in [AS/NZS 60598.2.18:1998](#).

For more information on electrical equipment used with pools and spas, please refer to the [Manufacturing and Installation - Electrical Safety](#) section of this guide.

Disability Access

Administrators, designers and owners of public pools and spas should ensure persons with disabilities have equal and unimpeded access to facilities. This can be achieved by following the information that is included in [AS 1428.1-2009, Design for access and mobility – General requirements for access – New building work](#). This Standard includes diagrams illustrating required circulation spaces and building access (including the use of ramps, handrails and stairs) that are accessed by persons with disabilities.

Tactile ground surface indicators used to assist persons with visual impairment should be designed and located by following the information in [AS 1428.4.1-2009, Design for access and mobility – Means to assist the orientation of people with vision impairment – Tactile ground surface indicators](#).

Hydrotherapy Pools

Information on design, construction and operational requirements for hydrotherapy pools is included in [AS 3979-2006, Hydrotherapy pools](#). This Standard includes appropriate water temperatures, chlorination and water quality levels.

Filtration devices used with hydrotherapy pools should conform to the details that are included in [AS 1926.3-2010, Swimming pool safety – Water recirculation systems](#).

SAI Global Product Certification Schemes

SAI Global Limited is the largest provider of third party product certification and testing services within the Asia Pacific, and is accredited against a broad range of Australian and International Standards, via its wholly owned subsidiary SAI Global Certification Services Pty Limited. Further information can be sought by contacting us at product@saiglobal.com.

The [Product Certification Services Group](#) offers a wide range of certification schemes tailored for swimming pool and spas.

StandardsMark

StandardsMark™ is a [System 5 certification scheme](#) which is used to certify manufacturers of electrical equipment to specific product performance Standards. The '5 ticks' StandardsMark™ certification requirements are:

- Testing of sample products by independent accredited laboratories
- Verification of test reports
- Audit of the manufacturing site for initial and ongoing compliance.

WaterMark Scheme

Plumbing products and plumbing fittings used in Australia are required to be certified under the [WaterMark](#) scheme. Taps, shower heads and other types of plumbing products are also required to be certified under the WELS (Water Efficiency Labelling Scheme). The SAI Global [WaterMark](#) scheme can be used to certify manufacturers of plumbing products and plumbing fittings under both schemes.

Unlisted Product Certification

Unlisted Product Certification has been developed for plumbing products that are not currently covered by an existing Standard or Technical Specification, but require [WaterMark](#) certification; SAI Global offers clients a service for currently Unlisted Products.

This process is based on a Technical Specification that is developed by the client that addresses all relevant design, performance, installation, operation and maintenance aspects of the product.

Electrical Type Test

[Electrical Type Test](#) certification is a [System 1 certification scheme](#). This scheme is recognised as an 'External Approval Scheme' by the Minister of Fair Trading NSW. Through this scheme manufacturers can demonstrate product safety compliance as required by the Electrical Product Regulators in Australia and New Zealand. Under this scheme, the minimum requirements are:

- Testing of product samples by independent accredited laboratories
- Assessment of test reports.

IECEE CB Scheme

IECEE CB scheme is an international scheme for mutual recognition of product safety certification between participating countries. Developed by the Worldwide System for Conformity Testing and Certification of Electrical Equipment (IECEE), the CB scheme is the first truly international system for acceptance of test reports dealing with the safety of electrical and electronic products. The main objective is to facilitate trade by promoting harmonisation of the national Standards with international Standards and co-operation among product certifiers worldwide.

SAI Global is the accredited National Certification Body (NCB) for Australia and New Zealand. SAI Global also issues internationally recognised CB Certificates that exporters can use to gain local electrical approval in overseas countries.



Please contact the [Product Certification Services Group](#) for more detailed information on the above schemes.

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Online Resources

Since January 2013, most Australian jurisdictions have enacted the new harmonised WHS Act. Find out what this means with Sherriff's Work Health & Safety Law Guide.

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Get anywhere, anytime access to information of which Australian Standards are referenced in which Australian Commonwealth, State and Territory legislation.

www.saiglobal.com/LexConnect

Do you need to be alerted of regulatory updates and how these changes are applicable to your business processes?

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Do you need online access to the latest National Construction Code and all the Australian Standards referenced within it?

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Do you need online access to the latest Building Code of Australia and all the Australian Standards referenced within it?

www.saiglobal.com/BCA

Do you need online access to the latest Plumbing Code of Australia and all the Australian Standards referenced within it?

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Industry Bodies and Associations

Swimming Australia

Website: www.swimming.org.au

Federation Internationale de Natation (FINA)

Website: www.fina.org

Royal Life Saving Society - Australia

Website: www.royallifesaving.com.au

Swimming Pool and Spa Association of Australia (SPASA)

Website: www.spasa.org.au

Swimming Pool Retail Association Australia

Website: www.spraa.asn.au/

Local Government Associations

Local Government NSW

Website: <http://www.lgnsw.org.au>

Municipal Association of Victoria (MAV)

Website: www.mav.asn.au

Local Government Association of Queensland (LGAQ)

Website: www.lgaq.asn.au

Local Government Association of South Australia (LGA)

Website: www.lga.sa.gov.au

Western Australia Local Government Association (WALGA)

Website: www.walga.asn.au

Local Government Association of Tasmania (LGAT)

Website: <http://www.lgat.tas.gov.au/page.aspx>

Regulators

Australian Building Codes Board (ABCB)

Website: www.abcb.gov.au

NSW Government

Planning & Infrastructure

Website: www.planning.nsw.gov.au

Division of Local Government, Department of Premier & Cabinet

Website: www.dlg.nsw.gov.au

Victorian Building Authority

Website: www.buildingcommission.com.au

State Government of Victoria

Department of Planning and Community Development

Website: www.dpcd.vic.gov.au

Government of South Australia

Department of Planning and Local Government - Planning in South Australia

Website: www.planning.sa.gov.au

Department of Planning and Local Government - Office for State/Local Government Relations

Website: www.localgovt.sa.gov.au

Government of Western Australia

Department of Regional Development and Lands

Website: www.rdl.wa.gov.au

Department of Local Government

Website: dlg.wa.gov.au

Queensland Government

Department of Local Government and Planning

Building Codes Queensland

Website: www.dlgp.qld.gov.au/our-services/building-codes-queensland-2.html

Tasmania Government

Department of Justice - Workplace Standards Tasmania

Website: <http://workplacestandards.tas.gov.au/safety/building>

Department of Premier and Cabinet – Local Government Division

Website: www.dpac.tas.gov.au/divisions/lgd

ACT Government

ACT Planning & Land Authority

Website: www.actpla.act.gov.au

Northern Territory Government

Land and Planning Services (Department of Lands, Planning and the Environment)

Website: <http://www.lands.nt.gov.au/>

Customer Service Contacts

Information Services Division

Standards & Technical Information Group

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Also Visit: [Further Construction Materials and Building Standards](#)

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