

ANSI/APSP/ICC-4 2012

American National Standard for Aboveground/Onground Residential Swimming Pools

Approved July 16, 2012



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**American National Standard for
Aboveground/Onground
Residential Pools**

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Approved July 16, 2012
American National Standards Institute

American National Standard

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Foreword

This Foreword is not part of the American National Standard ANSI/APSP/ICC-4 2012. It is included for information only.

The *ANSI/APSP/ICC-4 2012, Standard for aboveground/onground residential swimming pools*, was approved by ANSI on July 16, 2012.

This standard is a revision of *ANSI/APSP-4 2007, American National Standard for aboveground/onground residential swimming pools*.

The objective of this voluntary standard is to provide recommended minimum guidelines for the design, equipment, operation, and installation of aboveground/onground residential swimming pools. It is intended to meet the needs for incorporation into national or regional building codes, and also for adoption by state and/or local municipalities as a local code or ordinance. It is understood that for the sake of applicability and enforceability, the style and format of the standard may need adjustment to meet the code or ordinance style of the jurisdiction adopting this document.

The design recommendations and construction practices in this standard are based upon sound engineering principles, research, and field experience that, when applied properly, contribute to the delivery and installation of a safe product.

The words “safe” and “safety” are not absolutes. While the goals of this standard are to design and construct a safe, enjoyable product, it is recognized that risk factors cannot, as a practical matter, be reduced to zero in any human activity. This standard does not replace the need for good judgment and personal responsibility. In permitting use of the pool by others, owners must consider the skill, attitude, training, and experience of the expected user.

As with any product, the specific recommendations for installation and use provided by the manufacturer should be carefully observed.

This standard was prepared by the APSP-4 Aboveground/Onground Standard Writing Committee of The Association of Pool and Spa Professionals (APSP) in accordance with the American National Standards Institute’s (ANSI) Essential Requirements: Due process requirements for American National Standards.

Consensus approval was achieved by a ballot of the balanced APSP Standards Consensus Committee (members listed on p. iv) and through an ANSI Public Review process. The ANSI Public Review provided an opportunity for additional input from industry, academia, regulatory agencies, safety experts, state code and health officials, and the public at large. Inclusion in the list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

Suggestions for improvement of this standard should be sent to The Association of Pool and Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314.

This standard is published in partnership with the International Code Council (ICC). ICC develops and publishes the *International Building Code (IBC)* and *International Residential Code (IRC)*, which are adopted as the basis for the building codes used in most states and jurisdictions within the United States. Additionally, APSP and ICC have collaborated to develop the first comprehensive model swimming pool and spa code, known as the *International Swimming Pool and Spa Code*. This landmark document incorporates and references material from ANSI/APSP standards and ICC’s model codes, to create a stand-alone code that is consistent with codes and standards from both organizations.

These codes and standards are the result of a joint effort between ICC and APSP as a service to both the swimming pool and spa community, and building code professionals. It is the hope of both organizations that they will lead to enhanced safety for pool and spa users around the world.

Organizations Represented

Consensus approval in accordance with ANSI procedures was achieved by ballot of the following APSP Standards Consensus Committee. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

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 Higgins Environmental Solutions
 (National Environmental Health Assoc.) . . . Florence Higgins
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*non-voting

In accordance with American National Standards Institute (ANSI) procedures, this document will be reviewed periodically. The Association of Pool & Spa Professionals welcomes your comments and suggestions, and continues to review all APSP standards, which include:

- ANSI/APSP-1 2003 Standard for Public Swimming Pools
- ANSI/APSP-2 1999 Standard for Public Spas
- ANSI/APSP-3 1999 Standard for Permanently Installed Residential Spas
- ANSI/APSP/ICC-4 2012 Standard for Aboveground/Onground Residential Swimming Pools
- ANSI/APSP/ICC-5 2011 Standard for Residential Inground Swimming Pools
- ANSI/APSP-6 1999 Standard for Residential Portable Spas
- ANSI/APSP-7 2006 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins
- ANSI/APSP-8 2005 Model Barrier Code for Residential Swimming Pools, Spas and Hot Tubs
- ANSI/APSP-9 2005 Standard for Aquatic Recreation Facilities
- ANSI/APSP-11 2009 Standard for Water Quality in Public Pools and Spas
- ANSI/APSP/ICC-14 2011 Standard for Portable Electric Spa Energy Efficiency
- ANSI/APSP/ICC-15 2011 Standard for Pool and Spa Energy Efficiency
- ANSI/APSP-16 2011 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs
- APSP-17 Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems (Draft)
- APSP 2005 Workmanship Standards for Swimming Pools and Spas

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Standard for Aboveground/Onground Residential Swimming Pools

1 Scope

1.1 This standard describes certain criteria for the design, manufacturing, testing, care, and use of aboveground/onground residential (Type-O) non-diving swimming pools and their components.

1.1.1 Aboveground/onground residential (Type-O) non-diving swimming pools are defined as pools with a shallow area water depth of 36 in. (914 mm) minimum at the wall and a water depth of 48 in. maximum (1219 mm) at the wall. This includes portable pools with flexible/non-rigid or rigid side walls which achieve their structural integrity by means of uniform shape, support frame or a combination thereof, and can be disassembled for storage or relocation.

1.2 Aboveground/onground residential swimming pools are for swimming and wading only. No diving boards, slides, or other equipment are to be added to an aboveground/onground pool that in any way indicates that an aboveground/onground pool may be used or intended for diving or sliding purposes.

1.3 This standard does not apply to pools covered by *ANSI/APSP-1 Standard for public swimming pools* or by *ANSI/APSP-5 Standard for residential inground swimming pools* or other pools or spas designed for medical treatment, physical therapy, or other special purposes.

2 Normative References

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI Z535 series for safety signs and colors (5 standards) (2011)¹

ANSI Z21.56-2006/CSA 4.7-2006, *Gas fired pool heaters*²

- 1-3. American National Standards Institute (ANSI), 25 West 43rd Street, Fourth Floor, New York, NY 10036, (212) 642-4900, www.ansi.org
- 4-6. The Association of Pool and Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314, (703) 838-0083, www.APSP.org
7. National Electrical Manufacturers Association (NEMA), 1300 N. 17th Street, Suite 1847, Rosslyn, VA 22209, (703) 841-3200, www.nema.org
- 8-10. National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269 (617) 770-3000, www.nfpa.org
11. American Society of Heating, Refrigerating and Air Conditioning Engineers, 1791 Tullie Circle NE, Atlanta, GA 30329, (404) 636-8400, www.ashrae.org
12. American Society of Mechanical Engineers (ASME), 3 Park Avenue, 20th Floor, New York, NY 10016, (212) 591-8562, www.asme.org
- 13-15. ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428, (610) 832-9585, www.astm.org
- 16-18. Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, IL 60062, (847) 272-8800, www.ul.com
19. U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250; toll free (866) 512-1800; order online from <http://bookstore.gpo.gov>

ANSI Z21.56a (2006) - Gas fired pool heaters³

ANSI/APSP-7 (2006), *Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins*⁴

ANSI/APSP-8 (2005), *Model barrier code for residential swimming pools, spas, and hot tubs*⁵

ANSI/APSP-16 (2011), *Suction fittings for use in swimming pools, wading pools, spas, and hot tubs*⁶

ANSI/NEMA MG1-2011, *Motors and generators*⁷

ANSI/NFPA 54 (2012), *National Fuel Gas Code* (same as ANSI Z223.1-2002)⁸

ANSI/NFPA 58 (2011), *Storage and handling of liquefied petroleum gases*⁹

ANSI/NFPA 70 (2011), *National Electrical Code*, Article 680¹⁰

ANSI/ASHRAE 62-2001, *Ventilation for acceptable indoor air quality*¹¹

A112.1.2 (2011), *Air gaps in plumbing systems*¹²

ASTM D1593-2009, *Standard specification for nonrigid vinyl chloride plastic film and sheeting*¹³

ASTM D-1790-2008, *Standard test method for brittleness temperature of plastic sheeting by impact*¹⁴

ASTM F1346-91 (2010), *Standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spas, and hot tubs*¹⁵

UL 1081 (2011), *Standard for swimming pool pumps, filters, and chlorinators*¹⁶

UL 1261 (2010), *Standard for electric water heaters for pools and tubs*¹⁷

UL 1995 (2009), *Standard for heating and cooling equipment*¹⁸
U.S. Code of federal regulations, 16 CFR, Part 1303.1 et seq.¹⁹

3 Codes and Compliance

3.1 The authority having jurisdiction may require obtaining permits for installations (e.g., building, zoning, electrical).

3.2 Any after-market or home-built deck, if construction of such is allowed by the manufacturer, shall comply with the local building code, including load capacity and fencing requirements.