

DIVISION: 13 00 00—SPECIAL CONSTRUCTION
Section: 13 11 13—Below-Grade Swimming Pools

REPORT HOLDER:

ONLY ALPHA POOL PRODUCTS

EVALUATION SUBJECT:

ALPHA EVOLUTION & STRUCTURAL ARMOUR - WRS PRODUCTS IN-GROUND POLYMER WALL RESIDENTIAL SWIMMING POOLS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012, and 2009 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012, and 2009 *International Residential Code*® (IRC)
- 2021, 2018 and 2015 *International Swimming Pool and Spa Code*® (ISPSHC)
- 2021, 2018, 2015, and 2012 *Uniform Swimming Pool, Spa and Hot Tub Code*® (USPSHC)
- 2019, 2016, 2013 and 2010 *California Building Code*® (CBC)
- 2019, 2016, 2013 and 2010 *California Residential Code*® (CRC)
- 2020 and 2017 Florida Building Code® (FBC)
- 2020 and 2017 Florida Residential Code® (FRC)

Compliance with the following standards:

- APSP/ANSI 5-2011, Standard for Residential Inground Swimming Pools
- AC279, ICC-ES Acceptance Criteria for Vinyl-lined Residential Swimming Pool, approved date October 2005 (editorially revised April 2009)

2.0 USES

The Alpha Evolution & Structural Armour - WRS in-ground polymer wall swimming pools are permanently installed for recreational use as swimming pools and aquaculture tanks in residential and commercial applications with water circulated through a filter in a closed system. The pools comply with APSP/ANSI-5 as Type 0 pools. Diving equipment is prohibited.

3.0 DESCRIPTION

The Alpha Evolution & Structural Armour - WRS in-ground polymer composite wall swimming pools consist of wall panels, frames and supports, vinyl liners or alternate coatings such as paint or aquabright, and associated accessories (e.g., pool steps, copings, skimmer, filters, and lighting luminaires). Rigid vertical panels are comprised of high-impact polystyrene with integral vertical and horizontal ribs. Flexible, multiflex, vertical panels are comprised of polypropylene. Frames and brace supports (K-braces, Y-braces, and I-braces) are comprised of polyethylene. The vinyl liner and copings are optional. Pool designs are available in various configurations and sizes. The dimensions for recognized configurations are shown in Table 1.

4.0 DESIGN AND INSTALLATION

The Alpha Evolution & Structural Armour - WRS in-ground polymer composite wall swimming pools must be installed in accordance with this report and the manufacturer's published installation instructions. All plumbing and electrical work must comply with the codes in effect at the construction site.

The swimming pools/tanks must be installed in soils with maximum equivalent fluid pressures of 35 pcf (561 kg/m³) under nonsaturated conditions and 45 pcf (721 kg/m³) under saturated conditions. The swimming pools/tanks may be installed without a soil investigation by a registered design professional, subject to the code official's approval, provided none of the following conditions is encountered at the site:

1. The existence of groundwater within the pool excavation.
2. The existence of uncompacted fill in contact with any portion of the pool.
3. The existence of expansive-type soils.
4. The existence of any soil types with an angle of repose that will not support the walls of the excavation at desired slopes.
5. Danger to adjacent structures posed by the proposed pool location.
6. The existence of any cracks or openings in soil that would not confine sand bedding.
7. The setback between pools and slopes does not comply with Section 1808.7 of the IBC.

If any of the above conditions are encountered, excavation must cease immediately. The specified conditions at the site must then be reviewed, and recommendations made by a registered design

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professional. The code official must approve the registered design professional's recommendations before work is resumed. Details specifically for installations in expansive, clay, or adobe soils apply only when supported by the registered design professional's recommendations and approved by the code official.

The pool excavation profile must coincide with the contours of the pool. The site for the pool must be initially excavated to the required grade below the vertical wall panel depth. The site must be then over-excavated approximately 2 feet (610 mm) around the perimeter of the pool along its vertical wall panel line to permit installation of the wall panels and back braces. Excavation and fine grading of pool bottom and side slopes is then completed. Back braces and wall panels must be placed and bolted together. Plumbing and associated accessories must be installed. Concrete [minimum 2,500 psi (17.2 mPa) compressive strength at 28 days] is placed behind the panels around the perimeter of the pool 8 inches deep by 24 inches wide (203 mm by 610 mm), including the area behind any walk-in staircases, to fill the width of the excavation. Additional concrete is placed at each back brace to a minimum depth of 12 inches (305 mm). Concrete must be placed over the pool bottom to a depth of 2 to 3 inches (51 mm to 76 mm), with an additional smooth coat of 1/2-inch-thick (12.7 mm) concrete, trowel-finished. The vinyl polymer liner **or coating** must be installed according to the manufacturer's instructions to ensure a smooth, waterproof surface that conforms to the pool walls and bottom surfaces. Backfilling behind the pool panels then takes place using clean, porous soils, free of roots and debris, installed and carefully tamped in layers not to exceed 12 inches (305 mm) thick to eliminate voids. The backfill placement and filling of the pool are to be accomplished concurrently in order to prevent uneven loading on the pool panels and avoid potential collapse of the pool wall.

After completion of the backfill, the bond beam and decking must be installed in accordance with the manufacturer's published installation instructions and approved by the code official.

5.0 CONDITIONS OF USE

The Alpha Evolution & Structural Armour - WRS pools described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The pools must be constructed and installed in accordance with this report and the manufacturer's published installation instructions. In the event of conflict, this report governs.
- 5.2 Electrical, mechanical and plumbing installations must comply with the applicable codes in effect at the construction site.
- 5.3 Setback between pools and slopes must comply with IBC Section 1808.7 or IRC Section R403.1.7.
- 5.4 A barrier must be installed in accordance with IBC Section 3109.4 or IRC Section AG105, and ISPSC Section 305, as applicable.
- 5.5 Slip resistance and Vinyl liner are outside the scope of this evaluation report. Reports of slip resistance tests that demonstrate compliance with Section 8.1 of APSP/ANSI-5 must be submitted for approval by the code official.
- 5.6 Diving equipment may not be installed.
- 5.7 Suction outlets must be designed and installed in

accordance with IBC Section 3109.5, ISPSC Section 310 and IRC Section AG106.1.

6.0 IDENTIFICATION

Each pool bears a label with the name of Alpha Evolution & Structural Armour - WRS; the manufacturing plant location, a bar code for traceability; the model number; and the evaluation report number (ESR-4507).

A permanent sign, bearing the following statement, must be attached to the pool plumbing equipment:

Notice: The pool must remain full of water at all times. Pool may be damaged if the water level is allowed to drop below the skimmer. When appreciable drawdown is noticed or if it becomes necessary to drain the pool, the manufacturer must be contacted for instructions.

A permanent label must be attached adjacent to the above sign indicating the name, address and telephone number of the Alpha Evolution & Structural Armour - WRS products distributor.

- 6.1 The report holder's contact information is the following:

ONLY ALPHA POOL PRODUCTS
4404 EAGLE RIDGE DRIVE
FORT WAYNE, INDIANA 46804
(260) 637-0141
www.onlyalpha.com

TABLE 1 – FREEDOM AND FREEFORM DESIGNS

(Pool designs are available in various configurations and sizes)

	Distance between walls¹	DEPTH	POOL TYPE
Minimum	2'	3'	O
Maximum	150"	10'	O

For SI: 1 foot = 304.8 mm

Note 1: The span between two facing walls shall remain within the dimensions (min/max) listed in table. This table is not applicable to any landing and beach entry areas.