

by listed transformers or power supplies that comply with 680.23(A)(2) shall not be required to have GFCI protection.

**(C) Deck Area Heating.** The provisions of this section shall apply to all pool deck areas, including a covered pool, where electrically operated comfort heating units are installed within 6.0 m (20 ft) of the inside wall of the pool.

**(1) Unit Heaters.** Unit heaters shall be rigidly mounted to the structure and shall be of the totally enclosed or guarded type. Unit heaters shall not be mounted over the pool or within the area extending 1.5 m (5 ft) horizontally from the inside walls of a pool.

**(2) Permanently Wired Radiant Heaters.** Radiant electric heaters shall be suitably guarded and securely fastened to their mounting device(s). Heaters shall not be installed over a pool or within the area extending 1.5 m (5 ft) horizontally from the inside walls of the pool and shall be mounted at least 3.7 m (12 ft) vertically above the pool deck unless otherwise approved.

**(3) Radiant Heating Cables Not Permitted.** Radiant heating cables embedded in or below the deck shall not be permitted.

**680.28 Gas-Fired Water Heater.** Circuits serving gas-fired swimming pool and spa water heaters operating at voltages above the low-voltage contact limit shall be provided with **GFCI protection**.

### Part III. Storable Pools, Storable Spas, Storable Hot Tubs, and Storable Immersion Pools

**680.30 General.** Electrical installations at storable pools, storable spas, storable hot tubs, or storable immersion pools shall comply with the provisions of Part I and Part III of this article.

Pools, spas, and hot tubs of any dimension with inflatable or molded polymeric walls are considered storable. Other storable units are those that can be readily disassembled and are limited to a maximum water depth of 42 inches. See the defined terms *pool*, *storable (storable immersion pool)* or *spa or hot tub*, *storable (storable spa or hot tub)* in Article 100. A storable pool, its associated equipment, and perimeter do not require equipotential bonding as specified in 680.26. However, the filter pump must be listed (see 680.6), be double insulated, and have an EGC that is an integral part of the flexible cord. The 3-foot-length limitation for flexible cords in 680.8 does not apply to the power cord of equipment listed for use with a storable swimming pool. According to the product standard for storable pool pump/filter units, the cord must be at least 25 feet long to discourage the use of extension cords. All electrical equipment used with a storable pool is required to have GFCI protection for personnel. Exhibit 680.9 illustrates an inflatable swimming pool that is considered to be a storable swimming pool regardless of the water depth.



**EXHIBIT 680.9** Example of an inflatable swimming pool subject to the requirements in Parts I and III of Article 680.

The UL marking requirement for these listed units includes the wording "Do Not Use with Permanently Installed Pools."

**Δ 680.31 Pumps.** A cord-connected pool filter pump shall incorporate an approved system of double insulation or its equivalent and shall be provided with means for the termination of an equipment grounding conductor for the connection to the internal and nonaccessible non-current-carrying metal parts of the pump.

Cord-connected pool filter pumps shall be provided with a GFCI that is an integral part of the attachment plug or located in the power-supply cord within 300 mm (12 in.) of the attachment plug.

**Δ 680.32 Ground-Fault Circuit-Interrupter (GFCI) and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI) Protection.** All electrical equipment, including power-supply cords, used with storable pools shall have GFCI protection complying with 680.5(B) or SPGFCI protection complying with 680.5(C), as applicable.

All receptacles rated 125 volts through 250 volts, 60 amperes or less, located within 6.0 m (20 ft) of the inside walls of a storable pool, storable spa, or storable hot tub shall have GFCI protection complying with 680.5(B) or SPGFCI protection complying with 680.5(C), as applicable. In determining these dimensions, the distance to be measured shall be the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, doorway with hinged or sliding door, window opening, or other effective permanent barrier.

**680.33 Luminaires.** An underwater luminaire, if installed, shall be installed in or on the wall of the storable pool, storable spa, or storable hot tub. It shall comply with either 680.33(A) or (B).

**(A) Within the Low-Voltage Contact Limit.** A luminaire shall be part of a cord-and-plug-connected lighting assembly. This assembly shall be listed as an assembly for the purpose and have the following construction features: