

# Equipotential Bonding Requirements for Swimming Pools

2007 California Electrical Code Articles 800, 810, 820 and 830

Revised: July 2008

---

The intent of this newsletter is to clarify locally accepted methods for compliance with CEC 680.26. The 1965 NEC added requirements for grounding and bonding around swimming pools to eliminate voltage gradients in the pool area. The 2005 edition of the NEC added additional requirements for equipotential bonding, including a grid identified as the equipotential bonding grid, under 680.26(C). Subsequent to the publication of the 2005 edition, a Tentative Interim Amendment (TIA) was issued by the NFPA Standards Council on July 9, 2005 with an effective date of August 18, 2005 to revise 680.26 to state that these requirements do not apply to vinyl-lined, fiberglass, composite and other pools constructed of nonconductive materials. The requirements still apply for pools using encapsulated (epoxy-coated) reinforcing steel.

Where deck reinforcing steel is not an integrated part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum #8 solid copper conductor.

The elements to be bonded are those listed in 680.26(B).

The equipotential common bonding grid shall extend within or under paved walking surfaces for 3 foot horizontally beyond the inside walls of the pool. For clarification, paved walking surfaces include concrete, stone, wood, and composite materials.

Locally accepted methods for creating the required equipotential bonding grid to bond all the metal in and around the pool together into an interconnected grid are:

1. Those methods listed in the 2007 edition of the California Electrical Code
2. Reinforcing steel or 6x6x10 welded wire mesh in the deck
3. The alternate means identified in section 680.26(B)(2)(b) of the 2008 NEC -  
Bonding for perimeter surfaces shall be attached to pool reinforcing steel or copper conductor grid at a minimum of four (4) points uniformly spaced around the perimeter of the pool. 680.26(B)(2)(b) states "Where the structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met:
  - (1) At least one minimum #8 AWG bare solid copper conductor shall be provided.
  - (2) The conductors shall follow the contour of the perimeter surface.
  - (3) Only listed splices shall be permitted.
  - (4) The required conductor shall be 450 to 600 mm (18 to 24 inches) from the inside walls of the pool.
  - (5) The required conductor shall be secured within or under the perimeter surface 100 mm to 150 mm (4 inches to 6 inches) below the subgrade.