

Electric Shock Drowning

Statistics, NEC Information, What to do

What is Electric Shock Drowning?

- Electric Shock Drowning, or ESD, is a drowning resulting from paralysis caused by electric currents in the water
- There is no visible warning or way to tell if water is energized or within seconds will become energized with fatal levels for electricity
- There have been 21 deaths related to swimming pool electrocutions since 2002 (*U.S. Consumer Product Safety Commission*)

National Electrical Code (NEC)

- **NEC 680.4** requires all electrical equipment that is installed in the water, decks, or walls of a pool to follow requirements in Article 680
- **Article 680.7:** Grounding and bonding terminals must be identified for use in wet and corrosive environments and be listed for direct burial use
- **Article 680.14:** Pool-related areas are deemed “corrosive environments,” because of the pool sanitation chemicals that are used and stored there. Due to the nature of the moist pool environment, all equipment must be UL Listed to withstand these types of environments; which includes all grounding and bonding terminals
- **Article 680.26(C):** With none of the bonded parts in direct contact with the pool water, the water should be in direct contact with corrosion-resistant conductive surface that exposes less than 5800mm (9 inches²) of surface area to the pool water always. The conductive surface should be located where there is no physical damage or dislodgement during pool activities, and it should be bonded following Article 680.26(B).

What to do if you see (or suspect) Electric Shock Drowning

- **Do not enter the water!!** (*Or you could become a victim too*)
- Turn off source of power *if known and can be done safely*
- Call 911
- Use an insulated device to attempt to remove victim from water *if possible* (*remember: **Do not enter the water***)

Source links:

<https://www.esfi.org/electric-shock-drowning>

<https://www.electricschockdrowning.org/esd--faq.html>

Customer Service 1-800-346-4175 | Tool Service Center 1-800-426-8720 | Technical Services 1-800-451-4956 | www.burndy.com



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