



POOL
DEFENDER
ANODES & WATER BONDS

THE ESSENTIAL GUIDE TO

POOL WATER BONDING

ARE YOU
PROPERLY
WATER BONDING
EVERY POOL?

POOL DEFENDER® WATER BONDING PRODUCTS

POOL DEFENDER® WATER BOND SKIMMER

This is the best water bonding option for new construction in ground pools. With this method you can install the in ground skimmer exactly as normal, and the bonding connection is perfectly located for a convenient connection.

1. CONNECTS TO POOL BONDING WIRE
2. EMBEDDED COPPER WIRE
3. 304 STAINLESS STEEL BONDING PLATE



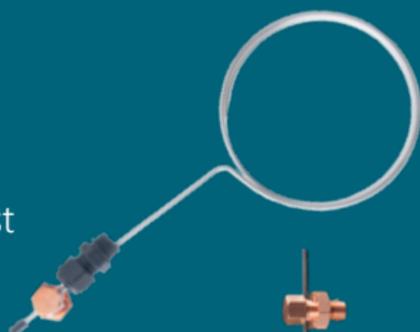
INLINE ANODE & WATER BOND

This combo unit has a steel plate that bonding as well as a sacrificial zinc anode. A perfect product for pools using a salt chlorine generator.



ABOVE GROUND PUMP WATER BOND

This clever device is a quick way to add bonding to most above ground pool pumps.



ECON UNION WATER BOND

This is a great, quick solution for above ground pools with a flex hose filtration system.



Proper pool bonding is an extremely important topic. The number one concern of any pool professional has to be the safety of all pool swimmers. Most of us are aware that all pools must be bonded. However, since 2008 the National Electrical Code (NEC) has mandated that pool water shall be electrically bonded, not just metals in the structure of the pool itself. NEC bonding requirements apply to in ground and above ground pools, and includes all metal components, equipment and the water itself. Correct pool bonding protects swimmers, pets and pool equipment.

Code enforcement for these requirements is becoming more consistent. But no matter how the code is enforced in your area, safety **MUST** be the highest concern. Successful pool professionals should already be meeting these requirements for all pool service and installations. CMP has been at the forefront of meeting NEC requirements, developing products that are designed to make proper water bonding an easy and cost-effective addition to the construction of every pool.

WHAT IS POOL BONDING?

Bonding is defined as: ". . .the practice of intentionally electrically connecting all exposed metallic items not designed to carry electricity in a room or building as protection from electric shock." (*Wikipedia*) Simply put, the primary purpose of bonding is to keep people and electricity separated. Stray currents (or electrical gradients) can occur in a swimming pool. Every metal component, the pool water and your body are all conductive and will carry electricity in the right situation.

In an improperly bonded pool stray currents are out of control and will seek the easiest path for conductivity. A bonded pool balances the electrical pressure and keeps all currents flowing outward into a bonding wire or grid where they are safely disbursed.

WHAT IS THE NEC?

NEC stands for *National Electrical Code*. The NEC code is maintained by the National Fire Protection Association and designed as a guide for knowledgeable trade professionals. It is the basis of code requirements for most jurisdictions. It is not on its own a federal requirement and adoption rates for NEC code updates can vary, so it is important to be aware of your local requirements as some may actually exceed requirements of the NEC.

In fact, NEC requirements are the bare minimum for safety. This is exactly the stance electrical inspectors, insurance companies, and courts will take when making a decision regarding electrical design or installation. Article 90 opens by saying the NEC isn't intended as a design specification or instruction manual. Ultimately safety has to be the number one concern and every possible step should be taken to keep pool swimmers safe. According to the NEC the number one purpose of the code is "the practical safeguarding of persons and property from hazards arising from the use of electricity."

WHAT DOES THE NEC SAY SPECIFICALLY ABOUT WATER BONDING?

Since 2008 the National Electrical Code (NEC) has mandated that pool water shall be electrically bonded, not just metals in the structure of the pool itself. All requirements for equipotential bonding, including bonding of the pool water, can be found in NEC Section 680.26(C). As required in NEC Section 680.26(C) the Bonding Device:

- Must consist of at least 9 sq. in. of conductive material
- Shall be in contact with the water 24/7, whether the circulation system is running or not
- The Connector (lug) must be unable to "back off" (due to vibration, etc.) at any time

WHAT CAN I USE AS A WATER BONDING DEVICE?

Traditionally the most common “water bonding device” has been at the pool light. Common pool lighting is housed in a metal “wet niche.” As a metal component the light must be bonded, and by creating a wet niche bond the pool water itself is properly bonded. According to NEC 680.26(B), the water bond device can consist of other metal parts that have already been properly bonded, so in these cases all requirements are met at the pool light.

But as you may know, pool lighting has changed a lot in the past five years. Plastic wet niches and completely nicheless LED lighting have become extremely common. In fact, some industry statistics show nicheless lighting is slowly gaining on traditional “wet niche” pool lighting. This has a significant effect on water bonding during pool construction.

If you have made the switch to nicheless lighting or plastic niches with no changes to how you are bonding a pool, then the pool is not safe! Unfortunately, you are not properly water bonding the pool. Once the metal wet niche is no longer available as a bonding device solution, you must find an alternative.

Fortunately there are options available from CMP that can make this an easy and cost-effective addition to pool construction. CMP offers a growing suite of products as part of the *Pool Defender*[®] product line. These products are all ETL Certified to UL and CSA standards.

CMP water bonding products include the Pool Defender[®] Water Bond Skimmer, Inline Anode & Water Bond, Econ Union Water Bond and Aboveground Pump Water Bond.

KEEP EVERY POOL SAFE WITH PROPER WATER BONDING

You can't mess around when it comes to electrical safety. Unfortunately, there are stories in the news every year about the tragic dangers related to electricity in a pool area. You owe it to your customers to keep their pool safe. The NEC has provided a clear solution for minimum pool bonding requirements. That's why we say: "Every Pool Needs A Defender™." Every pool needs to be fun, every pool needs to be well built and every pool needs to be safe.

**TO LEARN MORE ABOUT PROPER
WATER BONDING AND STAY UP
TO DATE WITH THE LATEST POOL
DEFENDER® BRAND PRODUCTS
FROM CMP VISIT:**

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