

## What is a High Risk Pool?

**According to the CDC Model Aquatic Health Code:** secondary disinfection requirements are defined for venues with an increased risk due to intrinsic characteristics of the water or of its users:

- Increased risk of microbial infection
- Pools intended for children under five and/or incontinent adults
- Splash pads, wading pools and pools with added features (water slides, play structures, etc)
- Therapy pools or pools with users at increased risk (patients with wounds, etc)

Pools with these characteristics require a second level of sanitizer in the water to keep them safe at all times.

### NSF 50 Certification for Secondary Disinfection

There are two main types of certification defined by NSF 50 for pool sanitizers.

**Supplemental:** Optional sanitizers that may be used to improve the water quality and system performance.

**Secondary:** Verified for a measurable kill of microbes including Cryptosporidium. An MAHC requirement for increased risk pools.

*DEL brand products from CMP are the only ozone sanitizers with 3rd Party Validation per NSF requirements*



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# CARING FOR HIGH RISK POOLS

WATER HEALTH  
AND SAFETY WITH  
A SECONDARY  
POOL SANITIZER

**CMP** COMMERCIAL  
PRODUCTS

## What are the options for High Risk Pools?

### Ozone Systems

- Ozone *Kills* Cryptosporidium Parvum
- Ozone *Kills* microorganisms
- Ozone is a *powerful oxidizer*
- Ozone passes into the pool at low levels to provide additional oxidation
- Ozone functions well in cloudy water and is a micro-flocculent which aids water clarification
- Ozone oxidizes chloramines and prevents their production
- Ozone oxidizes organic and inorganic compounds
- Ozone destroys biofilm that can harbor microbe colonies, including *Legionella*.

### UV Systems

- UV inactivates Cryptosporidium Parvum
- UV inactivates microorganisms
- UV is not an oxidizer
- UV affects the water as it passes the light
- Only clear water can be effectively treated with UV light; cloudiness significantly reduces efficacy
- UV breaks down Chloramines
- UV does not effect biofilm

*Ozone is faster, powerful  
and more effective*

### Other Ozone Benefits

- Utilize ORP to measure the cleanliness of the water
- Can be turned off and back on instantly
- Can run continuously 24/7
- Reaction with FAC is very slow—will not effect pool residual levels.
- Ozone cells require minimal service and have no hazardous components
- Destroys Humic and Fulvic Acid

## ---- RELATIVE OXIDATION REACTION TIME ----

**UV-C**  
*DOES NOT OXIDIZE*

**CHLORINE**  
*HOURS*

**OZONE**  
*MINUTES*

### YOU DON'T HAVE TO JUST TRUST US! HERE IS THE ACTUAL DATA:

#### ANTI-MICROBIAL ANSI/NSF PROTOCOL P308

ACTUAL MICROBIAL REDUCTIONS IN 30 MINUTES\*

E. coli: 4.7 log (>99.99%)

Staphylococcus aureus: 4.7 log (>99.99%)

Pseudomonas aeruginosa: 3.2 log (>99.9%)

Trichophyton mentagrophytes: 4.0 log (99.99%)

Candida albicans: 4.7 log (>99.99%)

#### ANTI-MICROBIAL ANSI/NSF STANDARD 50, ANNEX H

Actual Microbial Reductions in 6 Minutes\*\*

Pseudomonas aeruginosa: 6.6 log (>99.9999%)

Enterococcus faecium: 6.7 log (>99.9999%)

#### ANTIMICROBIAL FOR CRYPTOSPORIDIUM PARVUM

REDUCTION TESTED BY NSF INTERNATIONAL

Actual Microbial Reductions in 30 Seconds\*\*\*

Cryptosporidium parvum: 3.0 log (>99.9%)

\*Pass compliance requires a 3-log (99.9%) reduction in 30 minutes

\*\*Pass compliance requires a 3-log (99.9%) reduction in 30 minutes

\*\*\*Pass compliance requires a 3-log (99.9%) reduction of Cryptosporidium parvum



## THE DEL OZONE PRO DIFFERENCE

- NSF Standard 50 Annex H Listing for Secondary Disinfection
- Fully integrated package in a single enclosure
- Efficiency - Injecting under vacuum for better mass transfer
- Multiple Safety Interlocks
- Skid mounted systems for easy installation
- 100% Duty Cycle with no minimum off time or warm up periods