

# Aquatic Facility Rules Fact Sheet #6

What you should know about the Code

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## 5-7.3.1.3.1

### Cyanuric Acid

CYA or stabilized chlorine products shall not be used in indoor aquatic venues for all new construction, substantial alterations, or disinfection equipment replacements at the following:

- 1) SPAS and
- 2) Indoor pools.

## 5-7.3.1.3.2

### Aquatic Venues

The CYA level at all AQUATIC VENUES shall remain at or below 90 ppm (mg/L).

## 6.6.3.1

### Violations Requiring Immediate Correction or Closure

- 3) Aquatic venues using chlorine stabilizers where the CYA:DPD-FC ratio exceeds 45:1 or when CYA levels exceed 150 ppm.

### PUBLIC HEALTH REASONS:

Cyanuric acid (CYA) is often called a “stabilizer” and it helps protect free chlorine from breaking down in sunlight. It can be added separately or found in stabilized chlorine products such as trichlor and dichlor. While CYA can extend chlorine's effectiveness outdoors, it also reduces chlorine's effectiveness to disinfect the water, which is why pools using CYA must maintain a minimum chlorine concentration of 2 ppm. In spas, higher water temperatures cause chlorine to break down faster/evaporate and adding CYA reduces the chlorine's ability to kill pathogens.

## Cyanuric Acid (CYA)

High levels of cyanuric acid (CYA) in a pool makes chlorine less effective in killing pathogens like *Pseudomonas aeruginosa* (hot tub rash), *Legionella* (Legionnaires' disease) and more.



***CYA or stabilized chlorine products shall not be used in indoor aquatic venues after 4/1/29***

Exceeding the CYA to free chlorine ratio of 45:1 means the chlorine is unable to kill pathogens in the water. If this ratio is exceeded, the pool must

remain closed until CYA levels are lowered to ensure the chlorine works effectively. The ideal range for CYA is typically between 30-50 ppm. **Currently, high CYA levels can only be reduced by draining a portion of the aquatic venue and refilling with fresh water.**

Exceeding the 45:1 ratio (see below) will result in a closure until CYA levels are brought down or free chlorine lev-

CYANURIC ACID (CYA)	FREE CHLORINE (DPD-FC)
45 ppm	1 ppm (Closure due to free chlorine below 2 ppm)
90 ppm	2 ppm
135 ppm	3 ppm

### Why can't I use CYA in my spa?

- 1) Cyanuric acid already reduces the effectiveness of chlorine by binding to it and slowing its ability to disinfect. At higher water temperatures, chlorine breaks down faster and will evaporate as well (off gassing), so adding CYA worsens the problem and reduces the chlorine's ability to kill pathogens.
- 2) Spas also have much smaller water volumes than pools. Even use by a few bathers can create a high demand for chlorine. Stabilized chlorine products can make it harder to maintain a proper free chlorine residual needed for disinfection and the CYA can build up faster in a smaller volume of water.

### Why can't I use CYA in my indoor pool?

The role of CYA is to protect the chlorine from the sun to make it last longer. However, for an indoor pool, there typically isn't much sunlight. Using CYA at an indoor pool will be reducing the effectiveness of chlorine, without the need to protect the pool from the sun.

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Use this table to determine what action needs to be taken depending on the CYA and free chlorine levels in your aquatic venue:

CYA (PPM)	Free Chlorine (PPM)	45:1 ratio exceeded?	Does the pool need to be closed?	Required action
0-90 ppm	1 ppm	N/A	Yes	Raise free chlorine level to 2 ppm or greater. Consider lowering CYA level to 30-50 ppm
0-90 ppm	2ppm	No	No	Consider lowering CYA level to 30-50 ppm
>90 ppm	2ppm	Yes	Yes	Lower CYA level to 30-50 ppm
91-135 ppm	3 ppm	No	No	Lower CYA level to 30-50 ppm
136-150 ppm	3 ppm	Yes	Yes	Lower CYA level to 30-50 ppm
Over 150 ppm	N/A	N/A	Yes	Lower CYA level to 30-50 ppm