

# ACO

## For Active Catalytic Oxidation



### What is ACO?

ACO is an Active Catalytic Oxidiser that works by using the energy of the sun or UV light to catalyse the formation of free radicals to disinfect pool water. The radicals work just like chlorine to remove pollutants but they do not form combined chlorine. ACO is not consumed in the process, it just makes what happens naturally much more efficient. ACO also protects chlorine from photolysis by sunlight and makes it last three times longer in outdoor pools. ACO does the same as cyanuric acid, but instead of reducing oxidation capacity, ACO amplifies the disinfection of water.



### Your benefits at a glance

- ✓ **Eco-Friendly Water Treatment**  
 for outdoor swimming pools, ACO in combination with sunlight helps to disinfect the water. ACO is an oxidation catalyser and chlorine stabilizer.
- ✓ **A healthy bathing experience**  
 when using UV irradiation, the production of toxic disinfection by-products such as chloroform and cyanogen chloride are reduced.
- ✓ **High efficiency**  
 ACO extends the half-life of chlorine and peroxide by over 300 %, giving you substantial chemical savings.

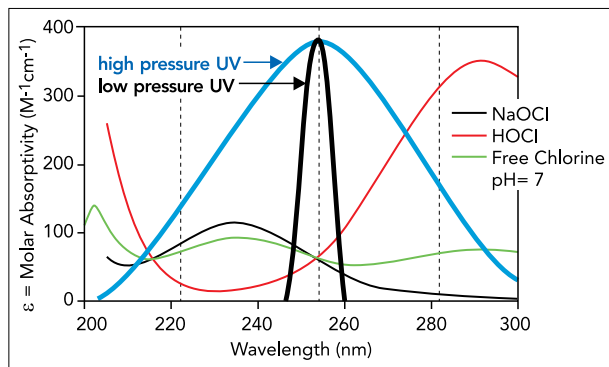


## Treat yourself and your family to the best

### How does ACO work?

ACO consists of a mixture of poly silicates and metal oxides. The short-wavelength, energy-intensive ultra-violet rays from the sun are converted by ACO into longer wavelengths. When this energy is released, it splits water molecules producing free radicals (hydroxyl radicals and oxygen radicals). They are even more powerful than ozone and can oxidize pollutants such as urea and chloramines completely back to carbon dioxide (CO<sub>2</sub>), water (H<sub>2</sub>O) and nitrogen (N<sub>2</sub>), so no combined chlorine or harmful disinfection by-products, just clean safe water.

By the conversion of the short-wavelength UV light to longer wavelength light, chlorine is protected from photolysis (decomposition by the sun). The half-life of chlorine increases by over 300%. In contrast to traditional chlorine stabilizers such as cyanuric acid, ACO amplifies the performance of chlorine to kill bacteria and provides you with cleaner, safer water for both private as well as public pools.



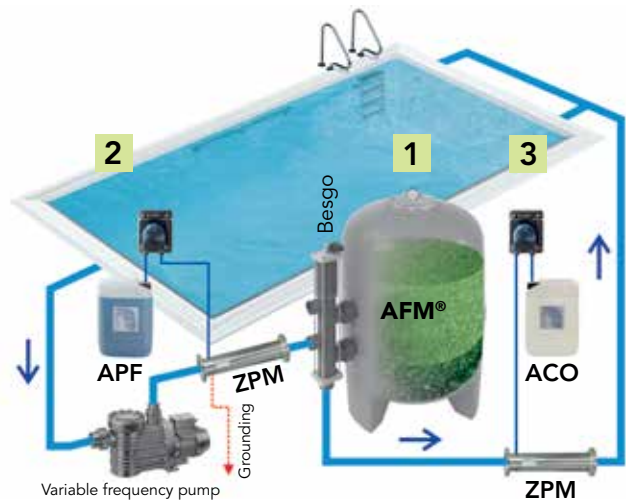
UV is used for dechloramination (reduction of combined chlorine), however medium pressure UV will double the chlorine demand. Also, some of the combined chlorine is converted to chemicals such as chloroform and cyanogen chloride that are hundreds of times more harmful than combined chlorine. When ACO is dosed into the water before UV, it helps to reduce chlorine demand and reduces the formation of harmful by-products.

ACO is a cationic flocculant, and in combination with APF, you get a double stage flocculation of both positively and negatively charged particles in the water.

### How to use ACO?

ACO is best dosed continually into a ZPM using our peristaltic pump (Dryden Aqua flocculation pump) after the AFM<sup>®</sup> filter; the dose rate is 1 ml per m<sup>3</sup> water circulated. ACO can also be dosed manually; the dosage is 1 l per 100 m<sup>3</sup> pool volume per week. We recommend the first dosage be double this amount. ACO takes around six to eight weeks before the full effects are visible.

#### DAISY filter circulation for private pools



- 1 Filtration with **AFM<sup>®</sup>**
- 2 Coagulation and flocculation with **APF** and **ZPM**
- 3 Catalytic oxidation with **ACO** and **ZPM**



#### ACO Bio:

For natural pools – especially if they have fish – we have developed ACO Bio.



### Who is Dryden Aqua?

We are a marine biological company specializing in water quality and innovative, sustainable treatment technologies. Our unique knowledge combination and detailed understanding of the biological as well as physio-chemical reactions has enabled us to develop a highly innovative range of products for aquaria and swimming pools. Therefore we became leader in water treatment for public and private swimming pools.

Our mission is: crystal clear and healthy water without any smell of chlorine. Today more than 100'000 pools worldwide using our system.