H2O Solutions USA

AQUAKLEAR J-62

The following document explains the effects of AquaKlear on pools using chlorine, not salt pools.

CHLORINE

WITHOUT AQUAKLEAR

Chlorine is used in pools to kill bacteria. As the pool is used, the chlorine continuously combines with urea (chemical from sweat) to form chloramines, which are not effective in killing the bacteria. That is why more chlorine needs to be added. Also, it is the chloramines, not the chlorine that produces the smell one associates with pools.

WITH AQUAKLEAR

AquaKlear by itself has the ability to kill bacteria. It does so by electrically charging the bacteria. The charged bacteria attracts pure water around it and through the process of osmosis, the pure water enters the bacteria, destroying it. When the water is passed through the AquaKlear on the way to the filter, the bacteria will be killed, but we still need to keep some chlorine in the pool as it takes a while for all the water to be pumped through the unit.

When we charge things (bacteria or particles) we only do it as it passes through the ferrites. So we only charge the particles at the unit, (although they stay charged and can stick together later) and we only kill bacteria as they pass through the unit. This is why we still need chlorine in the pool – the new bacteria entering the pool from the swimmers are not treated until the water is pumped past the unit so they have plenty of time to grow.

Also, the charge generated by the AquaKlear pulls the chloramines apart, keeping it as chlorine instead. This means that less chlorine is needed to kill the bacteria because the AquaKlear is killing bacteria and less chloramines are being created.
Also, the pool will smell better since it is the chloramines that are producing the smell and AquaKlear is destroying much of the chloramines.

ALGAE

The AquaKlear destroys much of the algae the same way it destroys bacteria – by charging the algae, attracting pure water around the algae and then the pure water enters and destroys the algae through osmosis.

FILTERS AND BACKWASHES

WITHOUT AQUAKLEAR

Most filters used are sand filters. The water passes through the sand and large particles will stay on the surface of the sand while smaller particles will get trapped in the sand. After a while, the smaller particles will clog up the sand making it difficult for water to pass through (similar effects occur for other types of filter). At this point, a backwash is needed. This reverses the flow of water and thereby cleans out the filter of the particles. Backwashing costs money in water and sewage charges, and also in terms of the energy required to heat the new water used to replace the backwash water.

WITH AQUAKLEAR

The AquaKlear's electric charge attracts the small particles together forming larger particles. Large particles are easier to filter and will not clog the filter as quickly. Therefore, with AquaKlear less backwashing is necessary and less time and water are needed to perform the backwash. In addition, AquaKlear allows the filter to remove smaller particles so the water will become clearer. An easy way to see this is that underwater lights will not produce a "beam" effect.

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