Maintenance of the sand filter

Washing efficiency of the sand filter is essential to get a high performance of filtration.
Over time, the effectiveness of the cleaning process decreases for two reasons:

The structure of the sand filter changes from a loosely packed granular structure to a mass of solid compacted material. The water to be filtered meets this mass and creates preferred channels or tunnels through which it flows. The surface area available for filtration is considerably reduced and the quality of the filtered water falls. In this state, filter cleaning products will be of little use.

Our UV Shield® shows the characteristic of forming a film. After several months or years, it can allow centres of algae or pockets of small algae spores to develop. It is emphasized that these spores are extremely small and invisible to the naked eye. These centres or pockets will become covered and protected by an aggregation of organic material, which will have a consistency varying between oil or grease to a sticky gum if the water is hard. When such an aggregation has formed, Oxysteril® will not be able to destroy it.

For the above reasons, it is important to incorporate our product UV Shield Cleaner® into your overall filter cleaning plan. This product alone can dissolve the centres of algae or pockets of small algae spores. (Refer also to the Engineering Note "Cleaning the sand filter" DT 981 5 464 TPE A)

Sequence of Treatments

Maintenance of the sand filter will be greatly facilitated by the appropriate sequence of use of the various treatments. In order to maintain a very efficient system of protection over a long period, the disinfection procedures detailed below must be carried out at the specified times.

The following points must also be borne in mind:

The volumes of pools with vinyl liners, or those made of glass fiber, are reduced by approximately 1/3 and the minerals and pollutants in the water will become concentrated over time.

After some years you will notice a decrease in the effectiveness of the UV Shield® and consequently an increase in the amount of UV Shield® that you have to use.

Finally, during the season, if the frequency with which algae appear becomes problematic or too high, you should adhere to the following procedures:

At the beginning of the season

(Start with chlorine 'Shock' disinfection)

At the beginning of the season after filling the pool we recommend that you follow these steps:

- Put the multi ways valve of the sand filter in 'filtration' position;
- Bring the water to balance, adjusting with calcium carbonate ($CaCO_3$), to give an alkalinity (TAC) of 100 ppm, regulate the pH to between 7.2 and 7.4; and a hardness (TH) of 200ppm;
- Continue to monitor and adjust the pH as needed between 7.2 – 7.4;
- Carry out a 'Shock' treatment adding chlorine granules** to the pool. Dosage is 130g to 150g / 10 m3. **Read the advice on the product carefully;**
- Check the concentration of free chlorine in the pool after one or two days;
- Add one puck of chlorine* per skimmer;
- If necessary, add another puck* per skimmer, one or two days later; Regulate the level of total (TAC) and of free chlorine (FC);
- Follow this procedure for one week;
- Allow time for the concentration of free chlorine in the pool to fall to zero.

When the FC concentration has fallen to zero, put the starting quantity of UV Shield® into the pool. Start the UV Shield® dosing pump; check the settings of the dosage pump.

After 3-4 days check the level of UV Shield® and adjust the dosage pump as needed.

During the season

Indications that treatment is required are:

High consumption of UV Shield®, persistence of the presence of algae,

Procedure for disinfection of indoor pools:

- Disconnect the UV Shield® dosage pump;
- Continue filtration of the pool water;
- Control the concentration of UV Shield®
- Continue to monitor and adjust the pH as needed between 7.2 – 7.4;
- Add chlorine granules** to the pool. Dosage is 130g to 150g / 10 m^3. **Read the advice on the product carefully;**
- Clean the water return pipes, first disconnecting their nozzles to facilitate the cleaning;
- The colour of the water might become slightly green;

- Check the concentration of free chlorine in the pool after two days;
- Put a chlorine puck* in each skimmer
- If necessary, add another tablet per skimmer, a few days later;
- Follow this procedure for one week;

- Allow time for the concentration of free chlorine in the pool to fall to zero.
- When the FC concentration has fallen to zero, reconnect the water return nozzles, then put the starting quantity of UV Shield® into the pool. Start the UV Shield® dosing pump, check the settings of the dosage pump;

After 3-4 days check the level of UV Shield® and adjust the dosage pump as needed.

At the end of the season (Preparation for winter)

This procedure should be carried out at the end of the season, one or two weeks before closure.

- Put the multi way valve of the sand filter in 'filtration' position;
- Disconnect the UV Shield® dosage pump;
- Continue to monitor and adjust the pH as needed between 7.2 – 7.4;
- Disconnect the water return nozzles;
- Put one chlorine puck into each skimmer
- If necessary, add another puck per skimmer, one or two days later; Regulate the level of total alkalinity (TAC) and of free chlorine (FC);
- Follow this procedure for one week;
- Proceed with the closure of the pool.

Remarks:

(*)Chlorine pucks (3") are stabilized, with a content of 90% FC approx, weight 200 g. Rate of free chlorine (FC) in pool: 1-3 ppm. pH 7.2-7.4. Total alkalinity (TAC): 100 ppm of $CaCo_3$. Total Hardness: 200 ppm of $CaCo_3$.

(**)Granulated chlorine: content of free Chlorine (FC) is fluctuant depending producer. This oxidizer will be used to perform a shock treatment for indoor or outdoor pool. Services department is available for all questions required. Please contact: info@uvtech.ca

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