



## HOW TO DEAL WITH WHITE FLAKES OR BIOFILM IN YOUR WATER

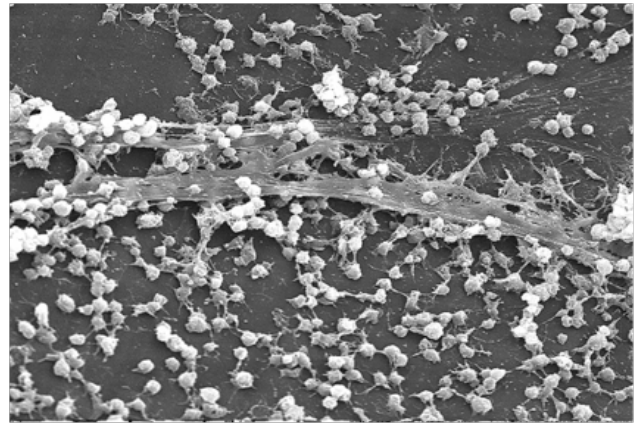
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## Introduction

In the past we have had customers coming to us asking why there are specks of white in the water. They believed that it was paint from the white metal frame. This isn't the case because the outer coating is baked onto the metal during the manufacturing process forming a skin. This type of coating would not come off as flakes and float in the water and is much stronger than conventional paint. If you see white flakes it is actually not paint but may be either calcium scale deposits or biofilm residue in your pool due to bad pool chemistry.



## Calcium Deposits

Calcium scale deposits occur when your water has too much calcium. The white flakes may be calcium deposits that have accumulated over time. The calcium hardness in your water should be balanced, if you are experiencing calcium scale deposits it means your calcium level is too high. This can happen sometimes if your water already has a high calcium level or if you super chlorinate the pool using a pool shocker chemical.

To reduce the calcium level of your pool one of the easiest ways is to add fresh water to dilute the calcium. An effective way to do this is to drain about 1/4 of the pool using the release valve and refill it with fresh hose water. After you have refilled your pool, run your filter pump two to three hours to circulate and mix the water.

If you want to use chemicals, there are two kinds that you can consider: clarifiers and flocculants. Flocculants work faster than clarifiers and take all the particles that are floating in the water and sink them to the bottom of the pool. When you use a pool flocculant you will see a cloud of debris at the bottom which you will need to use a pool vacuum to suck up. If you choose to use a pool clarifier instead you will need to run your filter pump up to 24 hours until the water is clear. Pool clarifiers work by clumping the particles of debris together making it easier for your filter pump to clean it out. Out of the two we recommend using a pool clarifier since our pool is so small it generally won't take 24 hours, but you should use a fresh filter cartridge before you have used the clarifier to clean your pool.

To test if the white flakes are due to calcium or biofilm take a small cup with a white flake sample floating it in and add about 15 to 20 drops of bleach. After about 30 minutes you can check and see if the white flake disappears or not. If your flake has dissolved it means the white flakes are due to white water mold, if not then it is due to calcium deposits.

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## Biofilm

Biofilm basically refers to a colony of bacteria living in your pool. Unfortunately some colonies become chlorine resistant which means that you will have to use other chemicals and other means of disposing them if they are the cause of the white flakes appearing in your pool. Biofilm does not need sunlight to grow but prefers warm water. Body oils, lotions, dead skin cells, cosmetics, etc all can become the basis for a biofilm colony. The best way to prevent biofilm is to maintain proper pool chemistry and remember to run your filter pump at least two hours a day to oxygenate the water. Besides white flakes from white water mold, a telltale sign of biofilm is cloudy water or a bad odor coming from the water.

To remove biofilm you are going to have to brush down the pool liner thoroughly with a pool brush and handle. Biofilm colonies can grow on various surfaces and once they grow on a surface are much harder to dispose of with chlorine or normal sanitizing chemicals. Once you have brushed down the pool liner thoroughly you will need to use an algacide or very powerful pool sanitizer and circulate it through the water to kill the free floating bacteria colonies. If you want to do a deep cleaning you may need to drain the pool and continue to scrub the liner. Using products like Clearicin, Soft Scrub with Bleach, or Soft Scrub Regular along with a sturdy Scotch-Brite sponge are all fine. After you refill the pool with clean water it is recommended to use a pool enzyme solution on a weekly basis that will get rid of the nutrients biofilm feed off of as a method of prevention.



The best way to prevent biofilm from growing is to properly monitor the pool chemistry, make sure the chlorine level is adequate on a weekly basis, and run the filter pump daily while changing the cartridges once a month. You can also add a weekly pool clarifier and enzyme solution as part of your routine to prevent both calcium deposits and biofilm. If you do have a biofilm growth the problem can still be remedied but will require more time and elbow grease to thoroughly sanitize your pool compared to the more easily remedied calcium build up. Biofilm or calcium deposits both take time to develop, so

remember it is important to monitor your pool weekly as a preventative measure.