



## Helpful Information for You and Your Pool

### How to Understand a White Film (Scale) on Pool Surfaces

#### Introduction:

If you have a saltwater pool, sometimes you may see “cloudy” pool water and even a thin or even significant white film on the pool surfaces. This will be more evident on darker colours.

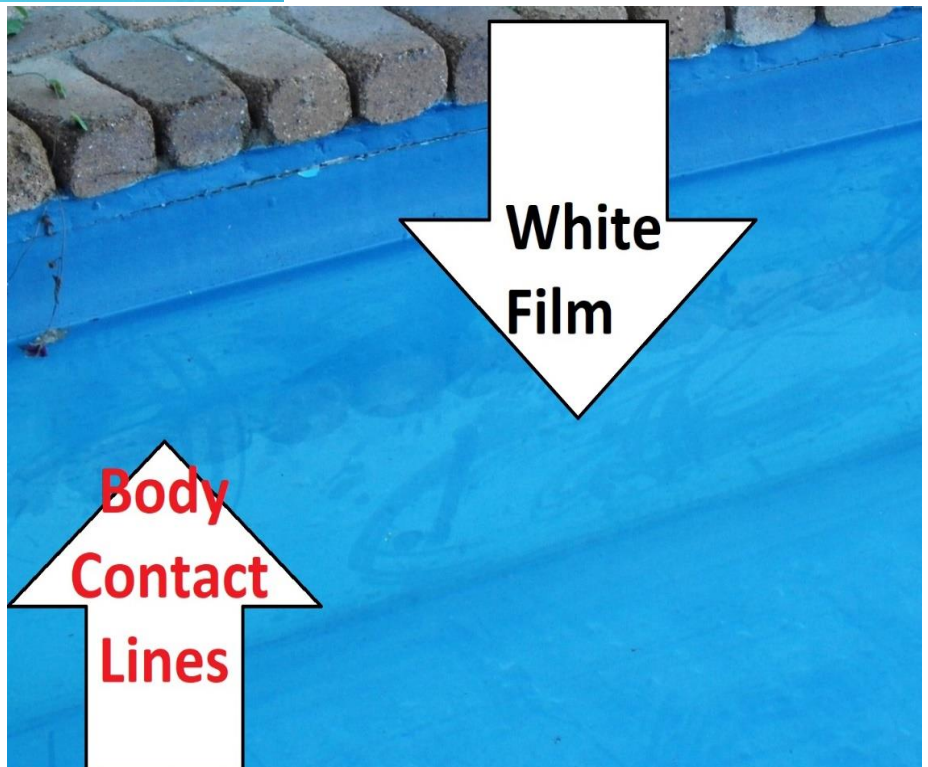


Fig 1, Cloudy water. Made up of dead algae, body fats, sunblock and insoluble particulates from the chemicals in the pool, inc salt. Sand filter may not remove anything less than 20 - 40 microns, cartridge filter (5-20 microns) can get blocked and not remove it all, and both types send it back into the pool. Diatomaceous earth (DE)

1-5 microns and removes “everything”. By comparison an ordinary grain of salt is about 100 microns.

Fig2 (right) Showing the white film (scale) on the pool surface, below water line. To be sure, lean over and open your fingers wide and reach down into the water a foot (30cm) and then with some pressure on the pools surface, draw upwards. Do you see any “clouds” in the water or where the fingers left lines. You may not see much but sense a “slimy” film on the surface or even at water line only. This is the early stages of it forming.

So be on the lookout for more, especially when the pool water gets colder (winter).



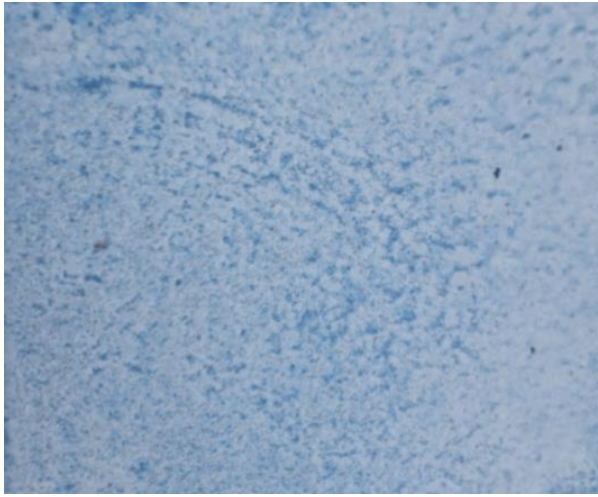


Fig 3 (left) The dark blue painted surface shows a lot of white scale. However, there are “peaks” of the dark blue paint showing through, where the pool “cleaner” has removed the white film, but not in the “valleys” between.

#### How to test?

The first way is to scour white the surface with a green – yellow Scotch Brite pad and a little dishwashing detergent. It will remove much of or all the white scale material showing it's a surface film. This can be done with pool water still in the pool. The underlying blue will still be there.

The easiest way **to be sure** is to drop the pool water till an area of white is above the water line, say 100mm (4 ins) or similar. Then when the exposed area is dry, with some pool acid (take good care) and an old toothbrush, dip in the acid, place it on the surface and watch the results. If it fizzes (see below) then it's calcium (carbonate) scale and other salts from the pool water. **NOTE:** Calcium sulfate can be present (white hard crystals) and does not react with pool acid.



Fig 4. The results of neat HCL (Pool Acid) on the white material and the fizz indicate its  $\text{CaCO}_3$  the result. The paint in this case is unaffected by the pool acid. There are usually other salts there also, and some of these also react with the pool acid.

**This white film should not be left as it hardens and becomes difficult to remove. So, deal with it as soon as seen forming.**

**How to remove the white calcium material.**

**Refer to: “Does The Painted Pool Look Like This?” plus: “Addressing Cloudy Pool Water.” The latter covers how to prevent buildup of the  $\text{CaCO}_3$  scale.**

*And may also want to refer to: **What is LSI or Langelier Saturation Index?** – for a more complete understanding of pool water chemistry and how to stop scale forming.*

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