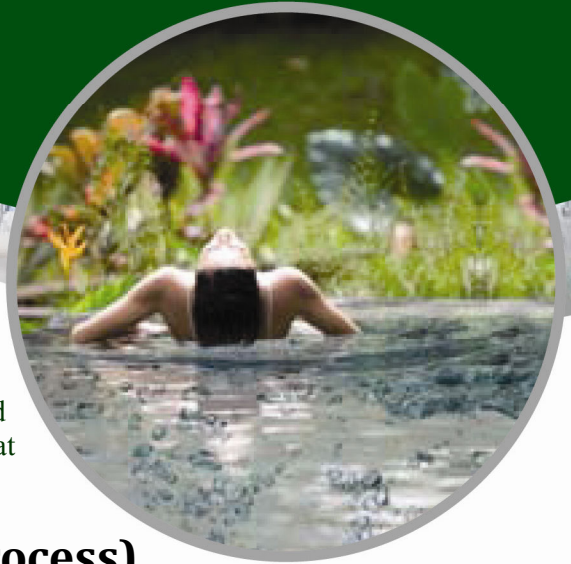


What is Biofilm?

Biofilm is a rapidly reproducing colony of microorganisms surrounded by their protective slime in an aqueous environment. They grow on surfaces where water doesn't flow and prefer environments where water is stagnant and void of sanitizer. In hot tubs, they are often found in the pipes where the water flow has been stopped or dramatically reduced (i.e. diverter valves isolate certain therapy returns, waterfalls where flow has been shut off, etc.). Biofilm is noticeable after water flow is returned to isolated pipes and is 'blown' back into the hot tub in the form of floating particulate that appears as tiny pieces of 'skin' or torn up pieces of tissue paper.



Removal: (do not use hot tub during this process)

1. Ensure that water is flowing freely through all pipes, waterfalls, etc. and leave this way for duration of treatment period.
2. Properly balance the hot tub water with particular attention to balancing the pH to within the proper range of 7.4 – 7.6. Test periodically over the next 3 – 5 days to ensure pH continuously stays within this range.
3. Elevate bromine or chlorine residual to 5.0 ppm or higher. Do not exceed 10 ppm. Maintain an elevated level for the next 3 – 5 days. Use **Dazzle™ Bromine Granules** or **Dazzle™ Chlorine Granules** to boost the level and maintain it. Test regularly to ensure the level stays at a minimum of 5.0 ppm.
4. Apply 150 mL of **Dazzle™ Algae Clear 60** per 1,000 L of hot tub water.
5. Run the pump periodically over the next 3 – 5 days to flush the pipes and keep the biofilm circulating in the water as much as possible.
6. After a minimum of 3 days, if the water is clear and the signs of biofilm have diminished or are gone, move to the next step. If not, ensure steps #2 and #3 are still in check and repeat step #4.
7. Once visible signs of biofilm are gone or after 5 days, stop additions of chlorine or bromine as in #3 above and allow the residual to lower to less than 5.0 ppm.
8. With chlorine or bromine level less than 5.0 ppm, apply 1 bottle of **Dazzle™ Drain Prep**, as per label directions. Remove filter cartridge and wait 2 days before moving to next step.
9. Clean filter cartridge with **Dazzle™ Filter Cleanse** as per label directions.
10. After 2 days, drain hot tub, clean inside tub with **Dazzle™ Tub Cleanse** and follow proper procedure for refilling the hot tub.

Prevention:

1. Always return diverter valve to position that allows flow through all return fittings after hot tub use.
2. Use **Dazzle™ Stain & Scale 1** with every fresh fill as per label directions.
3. Use **Dazzle™ Stain & Scale 2**, **Dazzle™ Amaze** and **Dazzle™ Botanical Cleanse** weekly as per label directions.
4. Continuously maintain pH and chlorine or bromine levels in proper ranges.
5. Use **Dazzle™ Drain Prep** prior to each drain as per label directions.

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Healthier, More Natural Hot Tub Care[™]