

## TREATING BIOFILM IN A HOT TUB



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### **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. Remove the filter cartridge & ensure that water is flowing freely through all pipes, waterfalls, etc. and leave this way for duration of treatment period.
2. Test hot tub water and ensure that the pH is within the proper range of 7.4 – 7.6, adjust pH as needed.
3. Elevate bromine or chlorine level to between 5.0 ppm & 10.0 ppm ( Do not raise above 10.0 ppm). Maintain an elevated level for the next 5 consecutive days using Dazzle™ Bromine Granules or Dazzle™ Chlorine Granules to boost the level and maintain it. Test regularly (2-4 times a day) with test strips to ensure the level stays at a minimum of 5.0 ppm. If the sanitizer level drops to below 5.0 ppm you will need to start back at day 1 of the 5 consecutive days.
4. Keep tub circulating & heating as normal during this treatment period.
5. After maintaining the sanitizer levels between 5.0 & 10.0 ppm for 5 consecutive days, stop additions of chlorine or bromine granules and allow the sanitizer level to drop to less than 5.0 ppm (Check levels 1-2 times daily with test strips).
6. Once chlorine or bromine levels reach 5.0 ppm or less, add 1 bottle of Dazzle™ Drain Prep (2 bottles of Drain Prep for a Swim Spa) as per label directions & allow to circulate for 2 days.
7. While treating biofilm chemically clean filter cartridge with Dazzle™ Filter Cleanse as per label directions. After filter(s) has been chemically cleaned, place it in a clean container, cover with water & add a teaspoon of bromine granules to kill any possible remaining biofilm. Let sit for an hour, rinse thoroughly & let dry completely before installing back into spa.
8. After 2 days, drain & rinse the hot tub, clean inside tub with Dazzle™ Tub Cleanse and follow proper procedure for refilling & balancing the hot tub.
9. Rinse filter every 2 days after biofilm treatment until filters run clear when rinsed.
10. Replace old or worn filter cartridges with new ones.

### **Prevention:**

1. Always return diverter valve to position that allows flow through all return fittings after hot tub use.

2. Maintain a proper water balance and sanitizer level & follow weekly maintenance routine.
3. Bring a water sample in to be tested regularly by our Buds Waterlab Specialists who will create a personalized maintenance routine for you.
4. Rinse your filter cartridge(s) weekly and chemically clean them every 4-6 weeks.
5. Use Dazzle™ Drain Prep prior to each drain as per label directions.