RECOMMENDED START-UP & MAINTENANCE PROCEDURES FOR ALL PEBBLETEC®BRAND POOL FINISHES

(If you have a Salt Water Chlorination Generator System (SWCGS) please review recommended applicable Start-Up & Maintenance Procedures.)

Congratulations! Your pool interior has just been surfaced using Pebble Technology superior quality pool products developed to be visually stunning and offer long-lasting durability. In order to ensure the beauty and longevity of your finish, we recommended certain procedures for start-up and ongoing maintenance which are outlined in this document.

"Break-In" Period

The "break-in" period refers to the period of time directly after the finish is installed when the Builder or Authorized Applicator enhances the finish surface prior to turning it over to you for start-up and ongoing maintenance.

This is the final step of the installation/application process and lasts approximately 1-3 days. Your Builder/ Authorized Applicator should communicate with you once this has been completed.

Start-Up Process

The start-up process is the finishing touch, to ensuring a beautiful and long-lasting pool finish. The start-up process is not hard to perform but does require frequent water testing, brushing and chemical balancing. It is important to note that the start-up will have the most influence on the final appearance and longevity of your interior finish.

Please note: During the first twenty eight (28) days, the product develops most of its durability characteristics. Therefore, it is critical to adhere to the start-up instructions to prevent harm to the surface. It is natural for some white material (plaster dust) to release from the new surface and enter the water, resulting in raised pH and calcium hardness levels.

It is very important that water chemistry be monitored closely. Frequently test and adjust the water within the acceptable ranges during this time. Failure to do so will result in white plaster dust adhering to the finish surface causing stains, blotchy discoloration and/or roughness.

1. Prior to Fill
    - It is recommended to test the source water prior to filling the pool, and to share that information with the responsible parties, so that necessary chemical adjustments can be made.
    - Due to uniqueness of the fill water or other environmental factors, some portions of the start-up procedures may need to be modified to protect the pool finish. For example, filling the pool with water having extremely high/low calcium hardness, high/low pH, or high/low total alkalinity may necessitate changes to these procedures.

   Additional *PebbleFina* and *PebbleBreeze* Finish Instructions:
    - *After application and prior to fill, PebbleFina* and *PebbleBreeze surfaces should remain uniformly dry. Therefore, it is important to evacuate or plug all plumbing lines leading to the pool.*
    - *Do not allow water to drip, spill, or puddle on the surface.*
    - *In the event of a rain episode during this time, immediately after the rain ceases, it is recommended to rinse the entire surface down to the deep end and continue with the filling of the pool at that time, by letting the water cascade into the accumulated water, which creates ripples and reduces the likelihood of forming a 'waterline mark' at any point during the fill process.*
2. The fill
    - Sometimes the "break-in" procedure involves filling the pool for you. If this is the case, jump ahead to step number three (3).
    - Fill the pool without interruption with clean, potable water to the midway point on the tile line or the midway point on the face of the skimmer.
    - Do not fill the pool with soft water.
    - Very important: If any hose bibs supply soft water, please notify the Builder/Authorized Applicator before filling.
    - Do not stop water flow for any reason as it will cause a "waterline mark" in the finish.
    - Do not enter the pool until it is completely filled with water (including pets).
    - Important: NO SALT SHOULD BE ADDED FOR THE FIRST TWENTY-EIGHT (28) DAYS.
3. Starting the equipment
    - Once the pool is full, start up the pool equipment and circulate the water continuously for a minimum of five (5) days, or until all white material (plaster dust) has been removed, filtered out, and is no longer visible when the finish surface is brushed, whichever is longer.
4. Adjusting water chemistry

   Once the pool equipment is running, adjust the water chemistry as per the following step-by-step instructions.
   (please refer to the checklist attached at the end of this document)

ACCEPTABLE START-UP RANGE* - FIRST 28 DAYS	*PPM = Parts Per Million*
pH	7.0 - 7.4
TOTAL ALKALINITY	80 - 100 PPM
CALCIUM HARDNESS	150 - 250 PPM
TOTAL DISSOLVED SOLIDS	400 - 600 PPM
FREE CHLORINE	1 - 3 PPM
CYA, CYANURIC ACID (*STABALIZER/CONDITIONER*)	20 - 30 PPM
LANGELIER SATURATION INDEX RANGE	Between -0.3 and 0.3

* PTI Recommended Acceptable Start-Up Range is designed for high-performance finishes and not recommended for traditional pool plaster.

- Do not load chlorine into the skimmer as this can discolor the floor area around the drains.
- All in-line 'stack' chlorine tablet feeders must have looped plumbing on both sides of the feeder or other means, to prevent the migration of chlorine/acid ions during the time that the pumps are off. Failure to do so will result in a discolored or etched finish around the water returns.

ACCEPTABLE ONGOING MAINTENANCE RANGE (AFTER 28 DAYS)

After the first twenty eight (28) days, balance the pool water according to APSP Ranges using the Langelier Saturation Index (LSI). This formula takes into account pH, carbonate alkalinity, water temperature, total dissolved solids, and calcium hardness.

For guidance, individual PTI recommended acceptable water chemistry parameters are given below:

ACCEPTABLE ONGOING MAINTENANCE RANGE* - AFTER 28 DAYS	*PPM = Parts Per Million*
pH	7.2 - 7.6
Carbonate Alkalinity	80 - 100 PPM
Calcium Hardness	200 - 300 PPM
Total Dissolved Solids	400 - 800 PPM
Free Chlorine	1 - 3 PPM
CYA, Cyanuric Acid *(Stabilizer/Conditioner)*	20 - 30 PPM
Langelier Saturation Index Range	Between -0.3 and 0.3

* PTI Recommended Acceptable Ongoing Maintenance Ranges are designed for high-performance finishes and not recommended for traditional pool plaster. Individual parameter ranges may be outside the above PTI Ideal Ranges as long as adjustments are made to the remaining parameters to ensure the Langelier Saturation Index remains within the -0.3 and 3.0 range.

BASIC START-UP CHECKLIST

IT IS IMPORTANT TO FOLLOW EACH STEP IN THE RECOMMENDED ORDER
PRIOR TO PROCEEDING TO THE NEXT STEP

DAY 1

_____ Step #1. Test fill water for pH, total alkalinity (TA), and calcium hardness (CH). Record test results.
_____ Step #2. High alkalinity should be adjusted downward to 80 ppm - 100 ppm using pre-diluted muriatic acid {31-33% hydrochloric acid). Always pre-dilute the acid by adding it to a five gallon (19 L) bucket of water.
_____ Step #3. Low alkalinity should be adjusted upward to 80 ppm using sodium bicarbonate (baking soda).
_____ Step #4. pH should be reduced to 7.2 - 7.6 adding pre-diluted muriatic acid (after the alkalinity is in range 80 ppm - 100 ppm).
_____ Step #5. Low calcium hardness should be adjusted upward to 80 ppm – 100 ppm. Adjustments of hardness increaser (calcium chloride) should be dissolved and added in 10 lb. increments, with each dosage separated by several hours. Never add hardness increaser (calcium chloride) and alkalinity increaser (sodium bicarbonate) at the same time.
_____ Step #6. Brush the entire pool surface thoroughly at least twice daily to remove all plaster dust. Wheeled vacuums or wheeled pool cleaners should not be used in the pool until after 28 days (brush vacuums or non-wheeled pool cleaners are allowed). We recommend using a Nylon, combo (50/50 Nylon and stainless steel) and polypropylene brushes four our exposed finishes (Tec, Sheen, Brilliance and Essence) Nylon brushes are only recommended for our underexposed finishes (Fina and Breeze).
_____ Step #7. Although optional, it is recommended by many to add a sequestering agent, following the manufacturer's recommended initial start-up dosage, and when used, to continue dosing at the recommended maintenance dosage thereafter.
_____ Step #8. Continuous operation of the pumps and filtration system is mandatory for 7-seven days, or until the plaster dust is brushed away and filtered out, and water is no longer cloudy (minimum of 72 hours).
_____ Step #9. DO NOT add chlorine for 48 hours. DO NOT turn on pool heater until there is no plaster dust in the pool.

DAY 2

_____ Step #1. Test pH, total alkalinity (TA), calcium hardness (CH) and repeat steps of DAY 1, except for Step #7.
_____ Step #2. Once the total alkalinity {TA) is adjusted to 80 ppm – 100 ppm and the pH is adjusted to 7.2 – 7.6, then adjust calcium hardness (CH) upward to 100 ppm - 150 ppm. Adjustments of hardness increaser (calcium chloride) should be dissolved and added in 10 lb. increments. Never add hardness increaser (calcium chloride) and alkalinity increaser (sodium bicarbonate) at the same time.

DAY 3

_____ Step #1. Test and adjust pH, total alkalinity (TA) and calcium hardness (CH) as per DAY 2 Step #2, and repeat Steps #6 and #8 of DAY 1.
_____ Step #2. Add pre-diluted chlorine or liquid chlorine to 1.5 ppm – 3.0 ppm level (IMPORTANT: For salt water (SWCG) pools, do not add salt within the first least 30 days).
_____ Step #3. Brush the entire pool surface thoroughly at least twice daily to remove all plaster dust.

DAY 4 - DAY 7

_____ Step #1. Calcium hardness (CH) should be increased (if necessary) to a minimum of 200 ppm.
_____ Step #2. Begin adjusting the cyanuric acid (CYA) to 30 ppm – 50 ppm. Add CYA through the skimmer while the pumps and filtration system are running for a minimum of 3-three days. After each addition brush the entirety of the interior finish. Concentrated CYA can cause pigmented finishes to discolor.

Ongoing Maintenance

_____ If there is any plaster dust remaining at Day 7, remove it using a brush pool vacuum.
_____ Continue to test and adjust pH and total alkalinity (TA) maintaining ranges of DAY 2 Step #2, and repeat Steps #6 and #8 of DAY 1 to help prevent the scaling of the pool surface.
_____ Once plaster dust is removed, and with a good pool cleaning system in place, brushing can be limited to the removal of visually observed material (leaves, dirt, etc.) or when adding chemicals.

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Important Notes

- Maintaining the Ongoing Acceptable Ranges as close as possible to '0.0' LSI, will lessen the likelihood of calcium salts precipitating out of the water and staining the surface.
- Do not use automated cleaners that have wheels for twenty-eight (28) days. Suction cleaners without wheels may be used, but brushing should continue until all cement dust residue is gone. Please refer to Builder/Authorized Applicator for recommendations regarding specific types of cleaners.
- Do not use heaters for the first fourteen (14) days and adjust plumbing to allow water to bypass the heater. Please only use heaters when there is no remaining plaster dust when pool is brushed.
- Please allow for first twenty eight (28) days before critiquing the final look and water color of your finish. All cementitious finishes have some variation in color, shading, consistency and exposure. Color variation and masking of the color is especially exaggerated in the first 28 days, as the cement continues to hydrate. These initial fluctuations in color tend to even out or subside with time.
- The finish will vary in color, shades, consistency and exposure. The darker colors will inherently have an increase in color variation, shading, consistency and exposure. This is the intended look of the finish and is not considered a defect. The color will vary throughout the day as the sunlight reflects from different angles.
- Failure to follow these instructions can result in costly service and repairs.
- Failure to maintain proper water chemistry will void the warranty. When submitting a PTI warranty claim, you will be required to submit weekly maintenance records. Many retail stores have computerized testing equipment to help monitor the chemical parameters, as well as others (cyanuric acid, metals, etc.). Ask your Builder/Authorized Applicator for the nearest location.

** THESE PROCEDURES ARE RECOMMENDATIONS ONLY. PTI IS NOT RESPONSIBLE FOR AND DOES NOT WARRANTY THE EFFECTS OF IMPROPER WATER CHEMISTRY. (I.E. SCALE, ETCHING, STAINING, ETC.) EVERY POOL ENVIRONMENT IS DIFFERENT, AND PTI CANNOT GUARANTEE THAT WATER CONDITIONS, WEATHER, UV EXPOSURE, ETC. WILL NOT AFFECT YOUR WATER CHEMISTRY IN AN ADVERSE MANNER EVEN IF THESE RECOMMENDATIONS ARE FOLLOWED.