



# 28 Day Startup Guide

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Thank you for choosing a Wet Edge Pool finish for your pool. We hope that you are pleased with your choice!

A brand new pool finish is hard to the touch, but it will take 28 days for it to be mostly cured. Balancing the pool/spa water immediately along with proper maintenance during the 28 startup is vital to the longevity and the cosmetic appearance of the pool finish.

## GETTING STARTED

### Startup Responsibilities

Consult with your contractor to gain a clear understanding of what **YOUR** responsibilities as the pool owner are during the 28 Day startup period.

### List of Do Not's during the startup

|   |   |   |
|---|---|---|
| <b>DO NOT STOP THE WATER DURING THE FILLING OF THE POOL AND SPA</b>   | <b>DO NOT USE SOFT WATER TO FILL YOUR POOL</b>                            | <b>DO NOT ALLOW PETS OR HUMANS IN THE FRESHLY PLASTERED POOL AS IT IS FILLING</b> |
| <b>DO NOT SWIM IN THE POOL UNTIL DAY 4 WHEN THE POOL IS SANITIZED</b> | <b>DO NOT USE YOUR HEATER FOR 14 DAYS</b>                                 | <b>DO NOT USE CLEANERS OR VACUUM HEADS WITH WHEELS OR TRACKS FOR 14 DAYS</b>      |
| <b>DO NOT ADD CYANURIC ACID ALSO KNOWN AS STABILIZER UNTIL DAY 4</b>  | <b>DO NOT ADD CHLORINE UNTIL DAY 3</b>                                    | <b>DO NOT ADD SALT UNTIL DAY 29</b>   |
| <b>DO NOT USE PHOSPATE REMOVER DURING THE FIRST 28 DAYS</b>           | <b>DO NOT PERFORM A LOW ALKALINITY TREATMENT DURING THE FIRST 28 DAYS</b> | <b>DO NOT PERFORM A HOT START</b>   |

### Warranty Registration

Register your pool finish within 60 days at <https://wetedgetechnologies.com/warranty>.

### Record Keeping

In the case of a warranty claim the following records must be presented to Wet Edge:

- Startup and weekly chemistry and maintenance logs.
- Logs should include pH, Total Alkalinity, Calcium Hardness, Cyanuric Acid, Total Dissolved Solids (TDS), Chlorine and water temperature readings.
- Monthly water test results performed by a third party testing center such as a pool retail store.
  - Most pool retail stores offer free water testing.
  - Put sample water in a clean bottle.
  - Air temperature can affect the water sample and should be tested within 30 minutes.

## BEST PRACTICES

### Pool Equipment

#### ***Pool filtration equipment must be operational prior to the pool being filled***

- Circulation and the filtering of the water is vital to remove the plaster dust that is created as the pool finish is curing.
- Read the equipment manufacturers operating and safety instructions.
- Check filter gauges often during the startup.
- Clean or backwash filters as needed.
- Cleanout debris in skimmer and pump baskets.

### Chemicals

#### ***Read the manufacturer's instructions and warnings!***

- Take all safety precautions detailed in the instructions.
- Always add chemicals to water - NEVER add water to chemicals.
- Always pre-dissolve all dry and pre-dilute acid before adding to the pool.
- Never throw chemicals directly onto the pool finish.
- Disperse chemicals around the pool avoiding steps and benches.
  - Chemicals are heavier than water and will harm the finish if dispersed in one spot.
- Chlorine tabs should never lay on the pool finish.
- Never let chlorine floaters remain over any steps, benches or in the skimmer.
- Dissolve granular chlorine in water before adding it to the pool water.
- Brush the pool after adding any powdered chemicals.

#### **Be aware:**

- Pre-dissolve calcium before adding it to the water - Always add calcium to water.
- Once mixed with water calcium will be hot.
- Do not add more than 10 lbs. of calcium with water in a 5-gallon bucket.
- Never mix together calcium and sodium bicarbonate.

### Chemical Testing Equipment

- The test kit needs to test for: pH, Total Alkalinity, Calcium Hardness, Cyanuric Acid, Total Dissolved Solids and Chlorine.
- Taylor Complete 2005 test kits or Spin Labs are highly recommended.
  - Reagent shelf life and the storage recommendation can be found in the kit instructions
- Test strips are not recommended.
- A pool thermometer will be needed to test the water temperature when gathering the chemistry readings.

### Testing the Pool/Spa Water

- Test the water chemistry twice a day for the first 14 days.
- Starting on Day 15 test the pool water once a day for the rest of the 28-day startup.
- Test once a week for the life of the pool.
  - Test the pool water more often during the hotter months or high swimmer volume.
- **Note:** If the water temperature is below 55°F, collect a sample of water and warm it up prior to testing it. Cold water will distort chemistry readings.
- Once a month after the initial startup take a water sample to a third-party testing center.
  - Most pool retail stores offer free water testing.
  - Put sample water in a clean bottle.
  - Air temperature can affect the water sample and should be tested within 30 minutes.

## Brushing the Pool/Spa

- Use a combo brush (nylon and stainless steel) on all Wet Edge pool finishes.
  - Brush the entire pool and spa surface.
  - Brush twice a day for the first two weeks.
  - Brush the pool once a week for the rest of the 28-day startup and for the rest pool's life.

## Vacuuming the Pool/Spa

- Vacuum on Day 1 and Day 5 or more often as you see plaster dust.
  - Use a brush or vinyl vacuum head – no wheeled devices or tracked devices.

# WATER CHEMISTRY BASICS

## The Langelier Saturation Index (LSI)

It may seem a bit complicated at first but learning water chemistry basics is the best way of protecting your investment. Use the Langelier Saturation Index (LSI) to startup and balance your pool water. The LSI is used by many industries and is a calculation used to determine if water has the potential to scale or be corrosive.

- The mathematical formula is:  
$$(\text{pH}) + (\text{Water Temperature } ^\circ\text{F factor}) + (\text{Calcium Hardness factor}) +$$
$$[(\text{Total Alkalinity ppm}) - (\text{CYA ppm} \times \text{correction factor @ current pH})] - (\text{TDS factor}) = \text{LSI}$$
- Once the pool finish is fully cured a perfect result of 0.00 means that the water is in balance.
  - An accepted range for swimming pool water is between -0.3 to +0.3
- Any more negative than -0.3 represents the pool water is in a corrosive state. The aggressive water will pull calcium from the cement. Corrosive damage on a pool finish cannot be reversed.
- Any result more positive than +0.3 is considered scale forming. Scale will form on the surface and makes the pool finish blotchy, streaked and can be rough to the touch. In many cases, scale formation through chemical treatments can be resolved.
- Thankfully there are apps and online calculators that can make the LSI calculation easy. The two most widely used apps have been developed by Orenda Technologies® and the National Plasterers Council. The Wet Edge team has found the [Orenda Technologies® LSI calculator app](#) to be more user friendly. These apps do all the math and will also calculate the correct amount of chemicals to add to the pool water if it is not in balance. If you do not have a smartphone, use the [water balance calculator](#) made by Taylor Technologies®.
- Out of balance water also affects the plumbing, equipment and anything that comes in contact with the pool water.

**-The Wet Edge warranty does not cover damage to the pool finish caused by unbalanced water-**

## Water Temperature

- Pool water temperature plays a factor in the LSI calculation. For example, the same water “in balance” at 80° can be out of balance and considered corrosive if the water temperature is at 60°.
- The Wet Edge recommended startup document gives you an acceptable range of the pool water chemistry, but Wet Edge does not know your pool water temperature.

## Calcium Hardness

Calcium Hardness (CH) is the most important factor to balance as quickly as possible, especially if the fill water has tested under 300 ppm Calcium Hardness (CH).

- Water will always look to achieve balance. If the water is low on calcium, it will pull the needed calcium from the cement in the pool finish to maintain balance. Calcium will leach to the surface and carbonate, leaving the pool finish discolored. The corrosive water can etch and cause irreparable damage to the pool finish.

## Chelating Agents

Chelating agents are recommended to prevent metals and minerals in the pool water from plating on the pool finish surface. They are a molecular structure that bind minerals and metals like iron and copper and keep them from dropping out of solution and staining or discoloring the pool finish. Using a chelating agent during startup and adding it weekly to the pool water is a good way to avoid stains and mineral build up.

- For pool startups we recommend the [Orenda Technologies® SC-1000](#). It is non-phosphate based and is NSF/ANSI Standard 50 certified chelating agent.

# FILLING THE POOL

## Testing the fill water

Test the fill water with a proper test kit (see above) and input the results into the [Orenda Technologies® LSI calculator app](#).

- Test for: pH, Total Alkalinity, Calcium Hardness, Fill Water Temperature, Metals (recommended)
  - Record the fill water test results.
- Do not use soft water to fill the pool.
- Well water can contain a lot of iron and impurities. We highly recommend that you add a chelating agent such as SC-1000 made by Orenda Technologies® to the pool water as soon as possible.
  - Adding chlorine before Day 4 can cause the metals to oxidize and stain the plaster.

## LSI Range for the pool fill water source

- Use the [LSI calculator](#) to show you how much calcium or sodium bicarbonate will be needed to achieve:
- Ideal - LSI of **+0.20 – +0.29** or a potential of up to **+0.49** at the highest.
- Target 300 ppm Calcium Hardness (CH) depending on the water temperature.

## Adding water to the Pool/Spa

- Use a clean sock or rag on the end of all hoses.
- **DO NOT STOP THE WATER UNTIL IT REACHES THE MIDDLE OF THE SKIMMER.**
- Do not let the water run over the spa spillway or overflow and run down the pool wall if the pool is not yet completely full.
- Instructions for trucked in water:
  - Use a garden hose to add a 1-to-2-foot cushion of water to protect the pool finish from high volume water sources such as trucked in water or fire hydrants.

## DAY 1

Immediately start the pool equipment and begin filtering the pool and spa water as soon as the water level is halfway up the skimmer.

- Set the pool equipment to run 24 hours a day.
- Brush vacuum (not a wheeled vacuum) the entire pool and spa.
- If calcium chloride or the chelating agent were **NOT** added to the Pool and Spa during the pool water fill add it now.

Check the water chemistry (after you brush vacuum) and input the test results into the LSI calculator.

Adding Calcium and Chelating Agent to the Spa:

- Fill a 5-gallon bucket halfway up with water and dissolve 1 lb. of calcium chloride (77% flake).
- Stir the calcium until it fully dissolves and has cooled down then add to the spa water.
- Add 4 oz of Orenda Technologies SC-1000 chelating agent to the spa.
- Gently stir the water in the spa.

Adding Calcium and Chelating Agent to the Pool:

- The tap water should have already been tested and the [LSI calculator](#) will have shown you how much calcium chloride or sodium bicarbonate you will need to achieve:
- Target 300 ppm calcium (unless the water is over 70° F, then target a minimum of 260 ppm).
- LSI of **+0.20 - +0.29** or a potential of up to **+0.49** at the highest.
- Disperse the prescribed amount of calcium to 5-gallon buckets.
- Fill 5-gallon buckets halfway up with water and dissolve no more than 10 lbs. of calcium per bucket.
- Stir the calcium until it fully dissolves and has cooled down before adding it to the pool water.
- Add the purge dose of the SC-1000 to pool water.
  - Note: The purge dose at startup is 1 quart per 10,000 gallons of pool water.
- If the water temperature is below 65°, put at least 50% of the SC-1000 purge dose in the 5-gallon buckets of pre-dissolved calcium (heat allows chelation to occur, whereas cold water renders SC-1000 and sequestrants dormant).
- If needed adjust the alkalinity with sodium bicarbonate.
- If the pH is 8.0 or above, lower pH to just below 8 (about 7.6 to 7.8)
- Measure the acid with a measuring cup, and pre-dilute it in a bucket of water.
- Pour the pre-diluted acid around the perimeter of the pool and then brush.
- Brush the pool/spa with a combo brush made with nylon and stainless steel bristles.
  - The entire pool/spa – floors and walls.
- Do not add chlorine until day 3.
- Do not add cyanuric acid (stabilizer) until day 4.
  - Most chlorine tabs contain cyanuric acid (stabilizer).
- Do not add salt until day 29.
- Record and log water chemistry readings.



## DAYS 2 - 4

### Pool & Spa Maintenance & Water Chemistry

- Run the filtering equipment 24 hours a day.
- Visit the pool twice a day – 5 to 6 hours apart.
- Test the pool water twice a day.
- Input the test results into a LSI calculator.
- Keep the LSI between +0.20 - +0.49
- Adjust the pH to 7.6 – 7.8 with diluted acid.
- Add non-stabilized chlorine on day 3.
  - Keep free available chlorine between 1 to 3 ppm.
- Add no more than 30 ppm of cyanuric acid if necessary, on day 4.
  - Concentrated CYA can cause pigmented finishes to discolor
  - Chlorine tabs contain CYA
- Do not add salt until day 29.
- Brush the pool/spa twice a day with a combo brush.
- The entire pool/spa – floors and walls.
- Record and log water chemistry readings.

## DAY 5

### Pool & Spa Maintenance & Water Chemistry

- Run the filtering equipment 24 hours a day.
- Visit the pool twice a day – 5 to 6 hours apart.
- Test the pool water.
- Input the test results into a LSI calculator.
- Adjust the LSI down to +0.0 - +0.30
- Adjust the pH to 7.2 – 7.6 with diluted acid
- Keep free available chlorine between 1 to 3 ppm.
- Brush the pool/spa twice a day with a combo brush.
- The entire pool/spa – floors and walls.
- Brush vacuum the pool and spa using a brush or vinyl head – no wheeled or tracked devices.
- Record and log water chemistry readings.

## DAY 14 - 28

### Pool & Spa Maintenance & Water Chemistry

- Run your pool equipment for the time it takes to sufficiently filter the pool water. Refer to the equipment manufacturers instructions.
- Visit the pool/spa once a day.
- Test the pool water.
- Input the test results into a LSI calculator.
- Adjust the LSI to **+0.0 - +0.30**
- Adjust pH to 7.2 – 7.6 with diluted acid
- Keep free available chlorine between 1 to 3 ppm.
- Brush the pool/spa with a combo brush once a day.
- The entire pool/spa – floors and walls.
- Manually vacuum the pool once a week or more often if plaster dust is present.
- You can now use wheeled devices
- Record and log water chemistry readings.

## Day 29

### Pool & Spa Maintenance & Water Chemistry

- Run your pool equipment for the time it takes to sufficiently filter the pool water. Refer to the equipment manufacturers instructions.
- Test the pool water and input results into the LSI calculator
- Adjust the LSI to **-0.3 - +0.3**
- Adjust pH to 7.2 – 7.6 with diluted acid
- Keep free available chlorine between 1 to 3 ppm.
- Record and log water chemistry readings.
- Cleaners with wheels or tracks can now be used in the pool.
- Salt Systems
  - Disperse salt evenly in the pool and brush until completely dissolved.
  - **Do Not** leave salt undissolved on the pool surface as discoloration will likely occur.
  - **Do Not** turn on salt cell for 24 hours.

[Learn more about salt systems and your pool water chemistry in this video by Orenda Technologies®](#)

## ONGOING POOL/SPA CHEMISTRY AND MAINTENANCE

### Pool & Spa Maintenance & Water Chemistry

- Run your pool equipment for the time it takes to sufficiently filter the pool water. Refer to the equipment manufacturers instructions.
- Test and record your pool water chemistry weekly.
- Target water chemistry
  - Adjust pH to 7.2 – 7.6 (always use diluted acid)
  - Calcium Hardness 300 to 400 ppm
  - Alkalinity 80 to 100 ppm
  - Cyanuric Acid 30 to 50 ppm
  - Chlorine 1 to 3 ppm
  - Salt 3200 ppm
  - Enter pool water temperature to determine LSI
  - Balance the water between the LSI to **-0.3 - +0.3**
- Use the [Orenda Technologies® SC-1000](#) per the manufacturer's instructions weekly.
  - This product aids in keeping scale and stains from attaching to the pool finish.
  - It can also help remove existing scale in pool heaters, salt generators and other equipment.
- The water may need to be tested more than once a week during hot weather or times with a high volume of swimmers.
- Brush the pool/spa with a combo brush once a week.
  - The entire pool/spa – floors and walls

### Requirements needed to make a warranty claim:

- Startup and weekly chemistry readings of:
  - pH, Calcium Hardness, Total Alkalinity, Total Dissolved Solids + Water Temperature
- If you use a pool service company, ask them to email you the weekly chemistry and service records.
- Tip: if you maintain your own pool use the Orenda Technologies® pool dosage app and email the weekly readings to your own email.
- Once a month have your pool water tested by a third-party testing center such as a pool retail store.
  - Most pool retail stores offer free water testing.
  - Put sample water in a clean bottle.
  - Air temperature can affect the water sample and should be tested within 30 minutes.

## HELPFUL VIDEOS ABOUT POOL WATER CHEMISTRY

Orenda Technologies® is a leader in pool water chemistry and the chemicals used to balance pool water. To learn more about pool water chemistry please watch these videos:

[Understanding the LSI: Langelier Saturation Index](#)

[How to use the Orenda App and LSI calculator](#)

[Orenda App 2.0](#)

[Calcium: Are you sure you're looking at scale?](#)

[pH vs Total Alkalinity](#)

[Why you should dilute acid?](#)

[Cyanuric Acid \(CYA\)](#)

[What is alkalinity?](#)

[What is the difference between pH and alkalinity?](#)

[Salt generators and calcium flaking](#)

[Water testing facts](#)

[SC-1000 facts](#)

## POOL FINISH DISCLOSURE

Pool interior finishes are composed of materials which may have inherent shading and/or color variation which is normal and should not be construed as a defect. Environmental factors such as humidity, temperature, substrate conditions, etc., during the installation process can cause normal color variations (normal mottling) across the surface of a coating. This is generally a uniform shading or cloudy appearance. These variations may be more pronounced on a cloudy day or at night with the light on. These conditions are beyond the contractor's control. Discoloration or mottled-shade variation is not considered a failure or defect, but is characteristic of most cementitious products, not needing remedy. It is a normal occurrence of most exposed aggregate finishes to have variation in the surface aggregate density, or variations in the concentration of aggregates across the finished surface. Proper evaluation of an interior finish is done when the pool is full of water and under natural light conditions only. The pool interior finish is NOT guaranteed for evenness of color and may not be the exact shade anticipated. The shade and color of pigmented surfaces will vary and "fade" over time. Craze (check cracks and hairline cracks), may be noticeable and may be quite pronounced with colored finishes and are normal and are not considered defects.

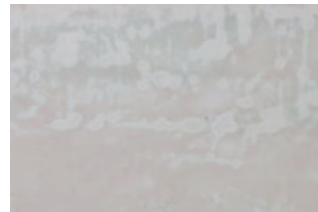
## STAINING AND DISCOLORATION

The most common discolorations found in swimming pools are scale and spot etching. Both can make the pool surface look blotchy and spotty and may even look like the pigment color has faded. In pebble pools, when water chemistry promotes scale, the buildup can cover the pebbles making the surface look uneven. The finish may even feel rough to the touch. The Wet Edge warranty does not cover scale, spot etching, or stains as they are topical and due to unbalanced pool water chemistry.

### Etching Deterioration

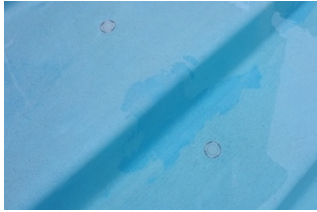
In a swimming pool finish, etching generally refers to any physical or chemical removal of material. Any chemical or physical action on a surface capable of removing or dissolving away elements or compounds of that surface. Etching deterioration can occur in several ways. The most common cause is aggressive water chemistry involving the pH, total alkalinity, CYA, calcium hardness, and the pool water temperature. Etching causes degradation of the cement comprising the finish.

- There is no topical test to determine if the pool finish is etching. It is a visual observation of the cementitious substrate. Etching deterioration can start as a whitish discoloration around the aggregate and will increase in size as the aggressive water continues to etch the pool finish. The pool finish will be blotchy, uneven, and will appear to have lost pigment color. Pebble finish pools may also experience pebble loss. Damage due to etching is irreversible.



### Scale

Scale is the crystalline buildup of inorganic materials. Most often, the mineral calcium during high pH fluctuations causes scale to form on the surface of the pool finish making it appear blotchy and rough to the touch.



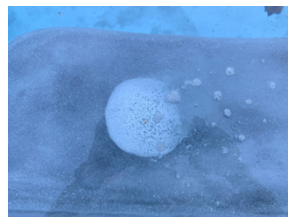
## How to test for scale

There are a few ways to determine if it is scale on the surface of the pool finish.

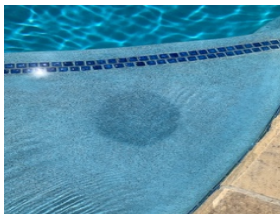
- Jack's Magic Stain Identification Kit
- Vitamin C powder for spot testing
- Dry acid for spot testing
- All are available at most pool stores or online

### Testing for scale with the Stain ID kit

- The Stain Identification Kit includes a small amount of 3 different identification/stain removal products. It will take you through a series of tests, using each of the products to find out if the discoloration/stain can be topical. For best results, the identification kit works best with the water temperature above 70 degrees day and night. Be sure to follow all the directions that come with the ID kit.
- Below are some examples of what you can expect when identifying a stain. The product applied to the pool surface will react and remove the scale leaving a stain-free restored area on your finish. The best practice is to put the product in your hand and make a fist. Release it underwater over the testing area. To test in deeper water or on the walls, place the product in a nylon stocking (knee-high or a filter sock) and toss it into the water, and guide it with a pool brush or pole to the stained area.
- Let each product react for 40-60 seconds and then brush it off the tested area.



The photos below will illustrate a test showing the removal of the scale. You can see a white film that has discolored the finish. It is present on the entire pool surface. When testing an area, you can see the reaction to the topical film or calcium precipitate. Once brushed away, the calcium precipitate is removed, and your Wet Edge finish is intact below the precipitate.





The good news is that the scale is on the surface of the pool finish. There are several ways to remove the scale from your pool surface. Please contact a local pool professional to find the best and most economical method for removing the scale from your pool finish.

We recommend using a chelating agent like Orenda Technologies® SC-1000 or a sequestering agent to combat scale buildup in your swimming pool and spa.

## Salt Systems and scale

- Scale buildup in salt systems can present as white flakes in the pool or spa.
- You will have to remain diligent in buffering the high pH environment in your pool water which is caused by the salt generator. Through the electrolysis process chlorine gas is made to sanitize the pool water. The chlorine gas produces a high pH at 13 that will cause scale buildup over time. If left unchecked white flakes will appear in the pool and spa every time the salt system reverses it's polarity.
- Balancing and buffering the pH should be done twice a week. This will help to avoid the peaks and valleys in the pH over the course of the week.
- We recommend using a chelating agent like Orenda Technologies® SC-1000 or a sequestering agent to combat scale buildup in your swimming pool and spa.