



# Scale Removal

Based on 10,000 gallons

(37,855 L)

## Overview

Carbonate scale is the consequence of water being over-saturated with calcium carbonate. This is measured in the saturation index (LSI). The scale begins to form when the LSI is above +0.30. To remedy, the LSI needs to be placed in a safe, but the slightly negative place (-0.30 to -0.01), to allow for the calcium to be brought back into solution.

Scale, especially on tile lines, is often compounded by organic waste that makes it difficult to clean off. We recommend a combination of both SC-1000 for the calcium and CV-600 for the organics.

## Day 1

1. Raise the water level and/or turn on water features to soak the scaled area(s).
2. Test the water chemistry, and input into the Orenda App under "current levels".
3. On the right side of the calculator (desired levels), adjust the pH to 7.2-7.4, and find a way to get the LSI between -0.30 and -0.01. The LSI number should be yellow.
  1. Add the prescribed amount of muriatic acid, pre-diluted in a bucket of water and poured evenly around the perimeter of the pool.
4. Add one quart (32 Fl.oz.) of CV-600 or CV-700 directly into the skimmer.
5. Add one quart (32 Fl.oz.) of SC-1000 directly into the skimmer.
6. Add chlorine, as SC-1000 will have depleted chlorine levels with the initial dose.

## Following Visits

1. If scale is still present, rub it with your fingers to see if it has softened or loosened. Brush and clean physically, avoiding abrasive tools that can scratch tile, etc.
2. Re-test the water chemistry each visit, and document the results in the Orenda App.
  1. pH tends to rise on salt generated chlorine pools, as well as when water features aerate the water.

3. Adjust the water chemistry to be back in the yellow LSI range of -0.30 to -0.01.
4. Apply maintenance doses of both CV-600 (5 Fl.oz./10,000 gallons) and SC-1000 (3 Fl.oz./10,000 gallons) directly into the skimmer.
5. Add chlorine, as SC-1000 may have still impacted the levels.
  1. Maintenance SC-1000 dosing should not impact chlorine levels noticeably.
6. Repeat the process on each visit until the scale has been removed.

### **Additional information**

This process generally takes 2-3 weeks. SC-1000 gently breaks down the carbonate scale, unlike acid. It needs time, and the water must be maintained in a slightly-negative LSI state to dissolve the calcium. Always measure doses of chemicals and use proper safety gear.

### **More Questions?**

**866-763-4269**

## SC-1000 vs. calcium issues

We commonly find confusion about what type of calcium deposits are actually in a pool. Is it carbonation? [Calcium dust](#)? [Scale](#)? [Calcium crystals](#)? While they are different calcium compounds, they are hard to tell apart. One way to think about it is this:

- **Scale** (calcium carbonate) is formed when *too much calcium* is in solution in the water, and it falls out of solution and hardens on surfaces. It will be evident on the face of tile, inside pipes and heat exchangers, salt cells, etc. The hotter the water, the more likely scale will occur. It occurs due to an LSI violation of being above +0.30 on the [LSI](#).
- **Calcite Crystals** occur when *not enough calcium* is present in the water, and the water stays cold for a prolonged period of time. The water is aggressive because it is hungry for more calcium...it seeks equilibrium and wants to be properly saturated. It will extract calcium from wherever it can. The most available source? Plaster and grout. Crystallized calcium is usually some form of calcite that grows out of the plaster surface and hardens. We know of at least 4 different types of calcite crystals. SC-1000 can help soften some of the types, but not all. Unfortunately, some types of crystals require physically grinding them away.

SC-1000 is not a replacement for balancing your water. It also cannot reverse etching already done. Because of this, if you're going to stray from the LSI safe zone, err to the high side, because scale is treatable. Etching is permanent.

Questions: Visit [orendatech.com](http://orendatech.com)