Pool Chemical Cheat Sheet

pH

- **Desired range:** 7.2-7.8
- **Purpose:**
  - Allows chlorine to work properly
  - Prevents eroding of metal elements in pool (pump/ motor/ heater) and therefore protects from metal staining.
  - Prevents eye/ skin discomfort
  - WARNING: **pH LEVELS THAT ARE TOO LOW/ HIGH CAN RUIN PUMPS, MOTORS, AND HEATERS. BE SURE TO MONITOR THIS LEVEL.**

Alkalinity

- **Desired range:** 80-120ppm
- **Purpose:**
  - Prevents pH from fluctuating
  - Can have same issues as pH will if out or range, they go together.
  - As alkalinity increases, pH will increase.

Calcium (Hardness)

- **Desired range:** 200-400ppm
- **Purpose:**
  - Prevents eroding of metal elements in pool (pump/ motor/ heater) and therefore protects from metal staining.
  - Keeps liner soft and not brittle.
  - Prevents eye/ skin discomfort
  - Prevents delamination of Gunnite pools
  - Prevents scaling of fiberglass.
  - WARNING: **CALCIUM LEVELS THAT ARE TOO LOW CAN RUIN PUMPS, MOTORS, AND HEATERS. BE SURE TO MONITOR THIS LEVEL CAREFULLY**

Chlorine

- **Desired range:** 2-4ppm
- **Purpose:**
  - Keeps water clear and clean
  - Prevents eye/ skin discomfort

- Too high:
  - Eye/ skin discomfort
  - Bleaching of liner/ clothes
  - Discolors hair
- Too low:
  - Smelly/ cloudy/ dirty water

Shock

- Purpose:
  - Cleans cloudy/ green water
- Types of Shock:
  - Liquid:
    - 1 gallon treats 10,000 gallons
    - Sunny weather burns off chlorine faster, add at night!
  - Granular:
    - 1-2lbs treats 10,000 gallons

Chlorine Stabilizer (Cyanuric Acid)

- Desired range: 30-150
- Purpose:
  - Extends the life of your chlorine, prevents the sun from burning it off.
- Too high:
  - Once your stabilizer reaches a level of 100ppm, keep an eye out for it. Stabilizer is added in pools through bags of powdered stabilizer, or through chlorine pucks. If your stabilizer is getting too high, switch to liquid chlorine to prevent any additional from being added.
  - IMPORTANT: ONCE STABILIZER IS TOO HIGH, THE ONLY WAY TO LOWER IT IS TO LOWER YOUR WATER LEVEL. IT MUST BE LOWERED FOR YOUR CHLORINE TO WORK EFFECTIVELY.

Algaecide

- Purpose:
  - Takes oxygen out of water, therefore preventing it from growing.
  - Kills existing algae
- Types of Algaecide:
  - Red algaecide: best algaecide for weekly maintenance for normal chlorine-based pools.
  - Poly 30: standard algaecide for aboveground pools.
  - Poly 60: twice as strong as Poly30, used when algae already exists.

- Algae Break 90: strong algaecide used for existing algae or for a once-a-season application.

Metal Removers

- Purpose: remove metals from water
  - Metals such as copper and iron can get into water if water chemistry is not balanced. See calcium and pH.
  - IMPORTANT: CHLORINE LEVELS MUST BE ZERO BEFORE ADDING A METAL REMOVE.

Phosphate Treatments

- Desired range: 0-500ppm
- Purpose:
  - Phosphates are organic/ inorganic materials that exist in pools such as: leaves, cotton wood, fertilizers, lotions, hairspray, and makeup. A phosphate treatment will remove phosphates, to ensure your water stays clear.
- When do I need to use a phosphate treatment?
  - If water is balanced (alkalinity, pH, calcium, and chlorine are within range), and your water is *still cloudy*, phosphates could be the cause.
  - If water is excessively cloudy
  - If you recently used an algaecide treatment
    - An algaecide treatment kills algae, therefore leaving dead algae behind. Dead algae is considered a phosphate.

Clarifiers

- Purpose: increase water clarity.
  - Clarifiers coagulate (clump together) small particles in your pool water that are too fine to be filtered out by your sand/ cartridge filter. Coagulation increases the size of these particles so they can no longer pass through the filter, and therefore clarifies the water.