

TROUBLESHOOTING GUIDE- CHEMICAL

SYMPTOM	CAUSE	SOLUTION
Chlorine test shows no residual chlorine level	Old or contaminated test reagents	Replace reagents or get new test kit
	High chlorine level (reagent briefly pink, then clear)	Allow chlorine levels to drop or neutralize with sodium thiosulfate
	High Bather Load	Add chlorine
	Not Enough or No Free Chlorine	Superchlorinate (Breakpoint chlorination or shocking the pool)
	Not Enough Free Chlorine	Raise chlorine to 2.0-3.0 ppm FAC
	Chlorine has lost its strength	Replace chlorine (common problem w/liquid chlorine)
	Pool not stabilized (sunblock)	Add cyanuric acid to 50-70 ppm

Rapid Loss of Chlorine	High Bather Load	Chlorinate
	Pool not stabilized	Add cyanuric acid to 50-70 ppm
	Chlorine has lost its strength	Replace chlorine (common problem w/liquid chlorine)

Strong chlorine smell

Not Enough or No Free Chlorine	Superchlorinate (Breakpoint or Shock) to eliminate chloramines
High combined chlorine	Superchlorinate (Breakpoint or Shock) to eliminate chloramines
Chlorine has lost its strength	Replace chlorine (common problem w/liquid chlorine)

Green color, pools feels "slimy"

Not Enough or No Free Chlorine	Superchlorinate (Breakpoint or Shock)
Growth of Algae	Superchlorinate, if not effective use specific algaecide. Broadcast granular chlorine while pump is off.
Chlorine has lost its strength	Replace chlorine (more common w/liquid chlorine)
Improper Water Balance	Determine Saturation Index, adjust pool accordingly

Green, brown or black algae spots on wall

Not Enough or No Free Chlorine	Superchlorinate, broadcast granular chlorine while pump is off. Let sit
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for 24 hrs.

Growth of Algae

Superchlorinate, if not effective use specific algaecide

Chlorine has lost its strength

Replace chlorine (more common w/liquid chlorine)

pH too high

Adjust downward (7.4-7.6ppm)

Bad water taste or smell (not chlorine odor)

Inadequate Filtration

Clean filter, check for problems with valves, gauges or pipes

High Bather Load

Chlorinate

High Total Dissolved Solid Levels

Test for total dissolved solids

Too much calcium

Test for calcium levels. If more than 400 ppm, drain some of pool water to waster and re-fill pool (if high calcium fill water, truck fresh water from outside source)

Not Enough or No Free Chlorine

Superchlorinate (Breakpoint or Shock)

Not Enough Free Chlorine

Raise chlorine to 2.0-3.0 ppm FAC

Chlorine has lost its strength

Replace chlorine (more common w/liquid chlorine)

Skin Irritation

Not Enough or No Free Chlorine	Superchlorinate (Breakpoint or Shock)
pH too low	Adjust upward (7.4-7.6ppm)
pH too high	Adjust downward (7.4-7.6ppm)
Too much chlorine/bleach out (reagent briefly pink, the clear)	Allow chlorine levels to drop or neutralize FAC
Chlorine has lost its strength	Replace chlorine (more common w/liquid chlorine)
Total alkalinity too low	Adjust upward (80-120 ppm)

Severe Eye Irritation

Not Enough or No Free Chlorine	Superchlorinate (Breakpoint or Shock)
pH too low	Adjust upward (7.4-7.6ppm)
pH too high	Adjust downward (7.4-7.6ppm)
High Bather Load	Chlorinate
Chlorine has lost its strength	Replace chlorine (more common w/liquid chlorine)
Total alkalinity too low	Adjust upward (80-120 ppm)

Corrosion or Etching of Plaster

Improper Water Balance	Determine Saturation Index, adjust pool accordingly
Too little calcium in water	Test calcium level, adjust upward (200-400ppm)
pH too low	Adjust upward (7.4-7.6ppm)
Total alkalinity too low	Adjust upward (80-120 ppm)

Scale Deposits

Improper Water Balance	Determine Saturation Index, adjust pool accordingly
Too much calcium	Test for calcium levels. If more than 400 ppm, drain some of pool water to waster and re-fill pool (if high calcium fill water, truck fresh water from outside source)
High Total Dissolved Solid Levels	Test for total dissolved solids, If more than 1000 ppm off some pool water to waste and re-fill pool
Unwanted minerals or metals	Allow 12 hr turnover of pool

water close
 skimmer lines if
 can isolate. If no
 improvement,
 determine
 saturation index,
 adjust accordingly.
 If still no
 improvement, use
 sequestration to
 hold in solution
 orchelating to help
 remove them.

pH too high	Adjust downward (7.4-7.6ppm)
Total alkalinity too high	Adjust downward (80-120 pm)

Cloudy Water

High Bather Load	Chlorinate
Not Enough or No Free Chlorine	Superchlorinate (Breakpoint or Shock)
Not Enough Free Chlorine	Raise chlorine to 2.0-3.0 ppm FAC
Inadequate Filtration	Clean filter, check for problems with valves, gauges or pipes
Improper Water Balance	Determine Saturation Index, adjust pool accordingly
High Total Dissolved Solid Levels	Test for total dissolved solids, If more than 1000ppm off some pool water to waste and re-fill pool
Too much calcium	Test for calcium

	levels. If more than 400 ppm, rain some of pool water to waster and re-fill pool (if high calcium fill water, truck fresh water from outside source)
Unwanted minerals or metals	Allow 12 hr turnover of pool water close skimmer lines if can isolate. If no improvement, determine saturation index, adjust accordingly. If still no improvement, use sequestration to hold in solution or chelating to help remove them.
pH too high	Adjust downward (7.4-7.6ppm)
Total alkalinity too high	Adjust downward (80-120 pm)
Chlorine has lost its strength	Replace chlorine (more common w/liquid chlorine)

Greenish Water Color (not algae)

Improper Water Balance	Determine Saturation Index, adjust pool accordingly
Inadequate Filtration	Clean filter, check for problems with valves, gauges or pipes
Unwanted minerals or metals	Allow 12 hr turnover of pool

	water close skimmer lines if can isolate. If no improvement, determine saturation index, adjust accordingly. If still no improvement, use sequestration to hold in solution orchelating to help remove them.
High Total Dissolved Solid Levels	Test for total dissolved solids, If more than 1000 ppm off some pool water to waste and re-fill pool
pH too low	Adjust upward (7.4- 7.6ppm)
Total alkalinity too low	Adjust upward (80- 120 ppm)

Reddish or Brown Stains

Improper Water Balance	Determine Saturation Index, adjust pool accordingly
Inadequate Filtration	Clean filter, check for problems with valves, gauges or pipes
Unwanted minerals or metals	Allow 12 hr turnover of pool

water close
skimmer lines if
can isolate. If no
improvement,
determine
saturation index,
adjust accordingly.
If still no
improvement, use
sequestration to
hold in solution or
chelating to help
remove them.

High Total Dissolved
Solid Levels

Test for total
dissolved solids, if
more than 1000
ppm off some pool
water to waste and
re-fill pool
Determine
Saturation Index,
adjust pool
accordingly

Water turns blue, brown or blackish when chlorine is added to the pool

Improper Water Balance

Determine
Saturation Index
and adjust pool
accordingly

Inadequate Filtration

Clean filter, check
for problems with
valves, gauges or
pipes

Unwanted minerals or
metals

Allow 12 hr
turnover of pool

water close
skimmer lines if
can isolate. If no
improvement,
determine
saturation index,
adjust accordingly.
If still no
improvement, use
sequestration to
hold in solution or
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remove them.

High Total Dissolved
Solid Levels

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dissolved solids, If
more than 1000
ppm off some pool
water to waste and
re-fill pool

NOTE: This guide is intended for basic solutions. There are other reasons that could cause these symptoms, every pool is different and will have unique problems. The purpose of this troubleshooting guide is to provide an initial check to eliminate common causes found.