

# Swimming pool applications

## Troubleshooting guide

Symptom	Probable cause	Underlying reason	To rectify
Cloudy water	Build up of dirt and bather pollution.	Insufficient chlorine or poor filtration.	Backwash filter then super chlorinate to 10mg/l of free chlorine. Add flocculant to polish water.
	Air being sucked into the system.	Poor filtration.	See 'Ineffective Filtration'.
	Start of algae growth.	Insufficient levels of chlorine. Prevent reoccurrence.	Super Chlorinate. After 24 hours backwash filter. Maintain chlorine level at 1.5mg/l.
	Chlorine ineffective.	Use of isocyanurates as chlorine donor? check stabiliser level.	If stabiliser level is more than 100mg/l - dilute pool water and super chlorinate.
	Precipitation of alkali salts.	High pH or alkalinity.	Ensure correct pH and/or alkalinity is maintained.
Unpleasant water	High combined chlorine.	Breakpoint chlorination not being achieved.	Super Chlorinate.
Sore eyes/throat	Detergents from cleaning compounds in pool water.	Reaction between chlorine and detergent.	Use bio-degradable cleaners.
Itching skin	Water too acid or alkaline.	pH too high or too low.	Bring pH to within parameters recommended.
Chlorine level difficult to maintain	In outdoor pools sunlight destroys chlorine.	Chlorine not stabilised.	Use stabiliser or stabilised chlorine.
	(Indoor or Outdoor) Build up of pollutants.	Insufficient chlorination.	Super-chlorinate.
	Chlorine not getting to pool.	Blockage or malfunction of chlorine dosing system.	Check injector, pump and auto controller.
Inability to get chlorine reading on test kit in spite of chlorine addition	Chlorine level may be too high.	High chlorine content bleaches reagent in test tablet.	De-chlorinate. If very high reduce with chemicals or dilute.
pH too low	Too much pH corrective getting to pool.	Auto control out of calibration or malfunction.	Check out pH corrective system and auto control.
	Alkalinity too high.	High TA locks in pH at incorrect level.	Check out alkalinity and maintain at 80-120mg/l.

Symptom	Probable cause	Underlying reason	To rectify
pH too high	Insufficient pH corrective being added or applied incorrectly.	Poor malfunction of system.	Check out auto control/calibration. Maintain pH between 7.2 and 7.6.
	High alkalinity.	pH locked in by high TA.	Reduce alkalinity to 80 - 120mg/l.
pH levels erratic	Insufficient bicarbonates to buffer pH	Low total alkalinity	Add bicarbonate to raise alkalinity to 80 - 120mg/l
pH locked in outside the recommended parameters of 7.2-7.6	High levels of alkalinity.	Topping up from mains water can increase alkalinity in hard water areas.	Check pH. Reduce alkalinity 80 - 120mg/l.
Low alkalinity	Bicarbonates reduced by dilution particularly in soft water areas.	Mains water has low level of alkalinity.	Add bicarbonate until alkalinity at recommended level. CO <sub>2</sub> can raise alkalinity when used as a pH correctant.
Pool walls feel slimy	Algae growth.	Insufficient chlorination and pool all brushing.	Super-chlorinate to kill algae. Sweep or vacuum debris. Prevent reoccurrence with algacide.
Dirt on pool wall at water line	Build of body fats, sun tan oil or cosmetics.	Irregular cleaning of surfaces.	Clean with bio-degradable chemical.
Rough scale formed on pool surfaces	Water out of "balance".	Ratio of calcium hardness to total alkalinity incorrect.	Check levels of pH alkalinity and calcium are within parameters recommended.
Sharp edges round tiles	Grout being leached by water.	Mains water too soft.	RegROUT the pool. Increase calcium levels to min 350mg/l and maintain. Consider change of sanitiser (calcium hypochlorite) to prevent reoccurrence.
Ineffective filtration	<u>Sand Filter</u> Is sand level correct?		
	NO	Not enough sand to filter out particles.	Renew or top up sand.
	YES	Blocked filter or filtration needs assistance.	Backwash filter and use flocculant.
	Is air being sucked into the filter.	Air will affect the efficiency of the filter.	Check all joints pre pump, gaskets on strainer pots and look for air being drawn into the system.

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