

WATER TEST GUIDELINES: the "TRAFFIC LIGHTS"

The frequency of chemical testing should be determined by the risk assessment, but recommended test intervals are:

- Before the pool opens
- Every three hours, or a minimum of 3 times per day, while it is open
- After it closes.

Reading	Red Light	Amber Light	Green Light	Amber Light	Red Light
pH	< 6.8	6.8 – 7.0	7.0 – 7.2	7.2 – 7.4	>7.4
Free Chlorine					
Sodium or Calcium Hypochlorite	<1.0mg/l	1.0mg/l – 1.5mg/l	1.5mg/l – 3.0mg/l	3.0mg/l – 5.0mg/l	>5.0mg/l
Iso-Cyanurates	<3.5mg/l	3.5mg/l – 5.0mg/l	5.0mg/l – 8.0mg/l	8.0mg/l – 10.0mg/l	>10.0mg/l
BCDMH	<3.0mg/l	3.0mg/l – 4.0mg/l	4.0mg/l – 6.0mg/l (Total Bromine)	6.0mg/l – 8.0mg/l	>8.0mg/l
If Ultra Violet Light is used	<0.3mg/l	0.3mg/l – 0.5mg/l	0.5mg/l – 0.75mg/l	0.75mg/l – 1.0mg/l	>1.0mg/l
Combined Chlorine	-	-	Less than 50% of Free Chlorine	60% of Free Chlorine	More than 1.0mg/l
Total Alkalinity					
Sodium Hypochlorite	<100mg/l	<120mg/l	120mg/l – 150mg/l	>150mg/l	>180mg/l
Calcium Hypochlorite	<50mg/l	<80mg/l	80mg/l – 120mg/l	>120mg/l	>150mg/l
Iso-Cyanurates	<80mg/l	<100mg/l	100mg/l – 140mg/l	>140mg/l	>160mg/l
BCDMH	<80mg/l	<100mg/l	100mg/l – 200mg/l	>200mg/l	>240mg/l
Calcium Hardness	<75mg/l	75mg/l – 100mg/l	100mg/l – 200mg/l	200mg/l – 300mg/l	>300mg/l
Total Dissolved Solids	-	-	Maximum of source water +1000mg/l	Source water + 1000mg/l	>source water +1000mg/l
Sulphate Turbidity	-	-	Less than 360mg/l	>360mg/l	
Turbidity	-	-	0.5 NTU	>0.5 NTU	
Cyanuric Acid (where chlorinated isocyanurates are used)	-	-	50mg/l – 100mg/l	100mg/l – 125mg/l	More than 125mg/l

CORRECTIVE ACTIONS

Amber light: corrective actions should follow if readings made during the first test of the day are outside operational guidelines. Corrective action should be implemented and tests then taken hourly. If the readings do not comply with operational guidelines within 2 tests, an investigation should be carried out as to possible causes.

Red light: corrective actions should follow if pH, Free Chlorine, Combined Chlorine or Total Bromine readings are outside prescribed parameters. The corrective actions should be monitored on an hourly basis. If the readings do not comply with operational guidelines within 2 tests, an investigation should be carried out as to possible causes and specialist advice sought.

Reading	Red Light	Amber Light	Green Light	Amber Light	Red Light
pH	Close the pool, until back in range. Check set point on dosing apparatus, and add sodium carbonate.	Pool can open. Check set point on dosing apparatus, and add an alkali. (sodium carbonate)	No action required. Continue to monitor	Pool can open. Increase free chlorine reading to 2.0mg/l as a minimum, across the whole pool.	Consider closing the pool, until back in range. Check set point on dosing apparatus, and add acid.
Free Chlorine/ Total Bromine	Close the pool, until back in range. Check set point on dosing apparatus, and increase disinfectant.	Check recent microbiological test results, to ensure that satisfactory standards are being maintained.	No action required. Continue to monitor	Pool can open. Check dosing apparatus, and slow the disinfectant dose.	Check set point on dosing apparatus, and stop the disinfectant dose.
Combined Chlorine	Pool can open.	Pool can open.	No action required. Continue to monitor	Pool can open.	Consider closing the pool, until back in range.
Total Alkalinity	Pool can open. Add Sodium Bicarbonate	Pool can open. Add Sodium Bicarbonate	No action required. Continue to monitor	Pool can open. Check source water level; dilute with fresh water.	Pool can open.
Calcium Hardness	Pool can open. Consider changing to a Calcium-based disinfectant,	Pool can open. Add Calcium Chloride (flake)	No action required. Continue to monitor	Pool can open. Check source water level; dilute with fresh water.	Pool can open. Consider installing a water softener
Total Dissolved Solids	Pool can open.	Pool can open.	No action required. Continue to monitor	Pool can open. Check source water level; dilute with fresh water	Pool can open. Dilute with fresh water.
Sulphate Turbidity	Pool can open.	Pool can open.	No action required. Continue to monitor	Check overuse and choice of chemicals; dilute with fresh water.	Pool can open. Dilute with fresh water.
Turbidity	Pool can open.	Pool can open.	No action required. Continue to monitor	Check overuse and choice of chemicals; dilute with fresh water.	Pool can open. Dilute with fresh water.
Cyanuric Acid	Pool can open. -	Pool can open. -	No action required. Continue to monitor	Pool can open. Dilute the pool with fresh water	Close the pool, and dilute the pool with fresh water