

Water Chemistry Guidelines

These commonly accepted chemical parameters do not supersede product label directions, local and state regulations.

Parameter	Min	Ideal	Max	Pool Type
Free Chlorine (ppm or mg/L)	1.0	2.0–4.0	5.0	Pools, Water-parks
	2.0	3.0–5.0	10.0	Spas
Combined Chlorine (ppm or mg/L)	0	0	0.4	Pools, Water-parks
	0	0	0.5	Spas
Total Bromine (ppm or mg/L)	2.0	4.0–6.0	10.0	All Types
PHMB (ppm or mg/L)	30	30–50	50	All Types
pH	7.2	7.4–7.6	7.8	All Types
Total Alkalinity as CaCO ₃ (ppm or mg/L)	60	80-100* 100–120**	180	All Types
Total Dissolved Solids (ppm or mg/L)	NA	NA	1,500 over startup	All Types
Calcium Hardness as CaCO ₃ (ppm or mg/L)	150	200–400	1,000	Pools, Water-parks
	100	150–250	800	Spas
Heavy Metals	None	None	None	All Types
Visible Algae	None	None	None	All Types
Bacteria	None	None	Local Code	All Types
Cyanuric Acid (ppm or mg/L)	****	30–50	****	All Types
Temperature °F/°C	78°F (25.5°C)	80.5°F (26.9°C)	82°F (27.8°C)	Competition Pools
	-	-	104°F (40°C)	Spas
	-	Personal Preference	104°F (40°C)	Other Pools
Ozone (ppm or mg/L)	-	-	0.1 over 8 hr time wtd. avg.	All Types

* For calcium hypochlorite, lithium hypochlorite, or sodium hypochlorite

** For sodium dichlor, trichlor, chlorine, gas, BCDMH

*** Start-up includes the TDS contribution of salt found in chlorine generating systems

**** Dictated by local codes. Typically 100 ppm (mg/L). Some codes are higher, some are lower

***** Some local codes may dictate a minimum and maximum