



Pool Maintenance Checklist

TDS 180

The information stated within this document is for reference only and is not intended to be used as a basis for exact pool and pool water maintenance. Pool water chemistry, disinfection levels, testing frequency, turnover rates, and operational requirements for public/commercial pools must be established and maintained in accordance with applicable local/state health department codes, facility policies, and equipment manufacturer requirements. For additional information refer to the LATICRETE Tiled Swimming Pools, Fountains and Spas Technical Design Manual, TDS 179 "Pool Maintenance Guide", and TDS 192 "Installation of Ceramic Tile in Swimming Pools". For industry resources and publications, consult the Pool & Hot Tub Alliance (PHTA): www.phta.org

Opening a Pool

- Remove, clean and store the pool cover
- Thoroughly clean and vacuum the pool
- Add water to the desired height at the prescribed rate of 1" (25mm) per hour
- Test and document water balance per local code/health department requirements (sanitizer, pH, alkalinity, calcium hardness, stabilizer if used, temperature, and any other parameters required by AHJ)
- Inspect electrical service, filters, skimmers, drains, ladders, diving boards, plugs, gauges, and other important components of the system
- Lubricate fittings, valves, o-rings, and plugs
- Inspect tile and grout installations; clean tile and skimmer using appropriate cleaner
- Validate test kit accuracy and/or verify readings using a calibrated meter/photometer per facility policy
- Backwash/clean filter only if required by pressure/flow criteria and manufacturer instructions
- Clean and inspect pool deck
- Skim pool water surface and vacuum pool bottom
- Perform oxidation treatment as required by local code and facility policy (e.g., chlorine-based super chlorination or non-chlorine oxidation where allowed)
- Adopt a routine maintenance program for the season
- Add algaecide as required

Pool Maintenance (daily)

- Operate circulation and filtration to achieve the required turnover rate per local code/health department requirements (do not rely on fixed "hours" unless your code explicitly allows it)
- Test and adjust sanitizer level as required by local code (increase frequency as bather load/environment requires)
- Visually inspect water clarity, color, and visible contaminants
- Test and adjust pH as required by local code (increase frequency as bather load/environment requires)
- Record water temperature per facility policy
- Test and record Combined Chlorine (CC) if chlorine is used; respond per local code/facility policy if CC exceeds allowable limits

Pool Maintenance (2 - 3 times weekly)

- Empty skimmer and pump basket (more frequently if required)

Pool Maintenance (weekly)

- Test and adjust total alkalinity per local code/facility policy
- Test and adjust Oxidizer and Stabilizer parameters if used (per local code and chemical manufacturer instructions)
- Remove leaves and debris
- Brush pool walls and floor and vacuum pool
- Check filter pressure/flow; clean/backwash only if required per manufacturer criteria
- Check water level and adjust as necessary at the prescribed rate of 1" (25mm) per hour
- Add a preventative algaecide only where permitted by local code and facility policy
- If automation is used (ORP/pH controllers), compare controller readings to manual testing; calibrate/adjust per manufacturer instructions and facility policy

Pool Maintenance (bi-weekly)

- Test and adjust Calcium Hardness

Pool Maintenance (monthly)

- Verify water chemistry using a pool water specialist and/or calibrated digital testing, per facility policy
- Test and document Total Dissolved Solids (TDS) and metals as required
- Test stabilizer (cyanuric acid) where used (unless stabilized chlorine is used, then test once every two weeks)
- Chemically clean the filter as required
- Visually inspect tile, grout, sealant, and other exposed elements of pool; document and repair as required
- Evaluate water balance/saturation tendency using LSI (or equivalent) tools as a screening method; adjust per facility policy and pool water specialist guidance

Langelier saturation index (lsi) – screening guidance

LSI is a screening indicator used to help understand whether water may be scale-forming or aggressive. Manual formulas are approximations and may not account for modern water chemistry variables (including stabilizer correction and elevated TDS). Use digital calculators/software and follow local code and pool water specialist guidance when establishing targets and corrective actions.

- Conduct Langelier Saturation Index ($LSI = pH + TF + AF + CF - 12.1$) evaluation and adjust as necessary

Temperature		Total Alkalinity [†]		Calcium Hardness	
°F	TF	ppm	AF	ppm	CF
32	0.0	25	1.4	25	1.0
37	0.1	50	1.7	50	1.3
46	0.2	75	1.9	75	1.5
53	0.3	100	2.0	100	1.6
60	0.4	125	2.1	125	1.7
66	0.5	150	2.2	150	1.8
76	0.6	200	2.3	200	1.9
84	0.7	250	2.4	250	2.0
94	0.8	300	2.5	300	2.1
105	0.9	400	2.6	400	2.2
		800	2.9	800	2.5

Use the reading closest to your actual reading in choosing the factor.

[†] Total alkalinity in this context refers to the total of carbonate and bicarbonate alkalinity. If cyanuric acid is used, a correction factor must be used (refer to local pool water specialist for the cyanuric acid correction factor).

Source: ANSI/APSP-11 2009

For example: The Langelier Saturation Index of pool water (without cyanuric acid correction factor) with a pH of 7.6, a temperature of 81°F (TF), Total Alkalinity (AF) of 100, and Calcium Hardness (CF) of 400 is calculated as $SI = 7.6 + 0.7 + 2.0 + 2.2 - 12.1 = 0.4$.

Closing a Pool

- Consult local code and facility winterization plan (and a pool water specialist where appropriate).
- Balance the pool water chemistry, typically to the following levels;
 - pH: 7.2 – 7.6
 - Total Alkalinity: 80 – 120 parts per million (ppm) [80 – 120 mL/L]
 - Calcium Hardness: 180 – 220 ppm
- Run circulation/filtration as required to stabilize chemistry prior to shutdown
- Remove baskets, cleaners, ladders, and fittings as applicable
- Lower the water level in the pool to 6" (150mm) below the skimmer level at the prescribed rate of 1" (25mm) per hour
- Drain and protect pumping/filtering/heating/sanitizing equipment to prevent freeze damage
- Lubricate o-rings, valves and plugs to make opening the pool in the spring easier
- Thoroughly clean and vacuum the pool
- Winterize the plumbing by blowing out the lines and plug the lines with expansion plugs
- Add winterizing algicide only where permitted/appropriate
- Cover the pool with a tight fitting cover

Chemical	Minimum	Ideal	Maximum
Chlorine	1 ppm (0.001 mL/L)	2 - 3 ppm (0.002 – 0.003 mL/L)	4.0 ppm (0.004 mL/L)
Cyanuric Acid	25 ppm (0.025 mL/L)	30 - 80 ppm (0.03 – 0.08 mL/L)	100 ppm (0.1 mL/L)
Bromine	2 ppm (0.0002 mL/L)	2.5 - 4 ppm (0.0025 – 0.004 mL/L)	5 ppm (0.005 mL/L)
Total Alkalinity	60 ppm (0.06 mL/L)	80 - 120 ppm (0.08 – 0.12 mL/L)	180 ppm (0.18 mL/L)
Calcium Hardness	150 ppm (0.15 mL/L)	200 - 400 ppm (0.25 – 0.4 mL/L)	1000 ppm (1.0 mL/L)
Total Dissolved Solids	NA	NA	Shall not exceed 1500 ppm*
Cyanuric Acid	0 ppm (0 mL/L)	0 ppm (0 mL/L)	0.1 ppm (0.0001 mL/L)
pH	7.2	7.4 - 7.6	7.8

* Total Dissolved Solids (TDS) should be evaluated relative to source water quality and the pool's sanitation system. For modern pools, including saltwater systems, TDS is commonly managed as the source water baseline plus an allowable increase established by local code, equipment manufacturer requirements, and pool water specialist guidance.

Saltwater pools will inherently operate at higher TDS levels due to salt content. Elevated TDS alone is not necessarily problematic; however, excessive TDS may reduce chemical effectiveness and should be evaluated by a qualified pool water professional

Saltwater pools (salt chlorine generation) – additional requirements

Saltwater systems require additional monitoring beyond traditional chlorine dosing. Maintain the salt concentration and operating range strictly per the salt system manufacturer and the facility plan.

- Verify salt level and cell performance per salt system manufacturer requirements (do not use generic salt targets)
- Inspect salt cell routinely for scale; clean only per manufacturer instructions to avoid reducing cell life
- Maintain pH, alkalinity, and calcium hardness within the ranges required by local code and facility policy to help reduce scale formation on cell plates
- Confirm automation/controller readings with manual testing; calibrate sensors per manufacturer instructions
- Recognize that salt systems inherently increase TDS; evaluate water balance using adjusted tools and pool water specialist guidance
- Document all readings and maintenance actions in the facility log

Public/commercial pools – compliance note

Public/commercial pools must follow applicable local/state health department codes and facility operating policies. Where applicable, consult CDC MAHC-aligned guidance and current PHTA/ANSI publications; however, the Authority Having Jurisdiction (AHJ) governs compliance.

Safety note (chemical handling)

Follow chemical manufacturer instructions and local regulations. Use appropriate PPE (gloves/eye protection), provide ventilation, and never mix chemicals unless specifically directed. Store chemicals in original containers and keep incompatible products separated.

Consult the most current PHTA/ANSI standards for public pool water quality and operations and always follow applicable local/state health department codes (Authority Having Jurisdiction). Where needed, consult a qualified pool water professional for project-specific water balance ranges and maintenance procedures.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at <https://laticrete.com>
TDS 180.doc R PA 26 March 2026

For the Builders of a Better World™

LATICRETE International, Inc ■ One LATICRETE Park North, Bethany, CT 06524-3423 USA ■ Tel 1.203.393.0010 ■ Toll Free 1.800.243.4788 ■ Fax 1.203.393.1684 ■ laticrete.com