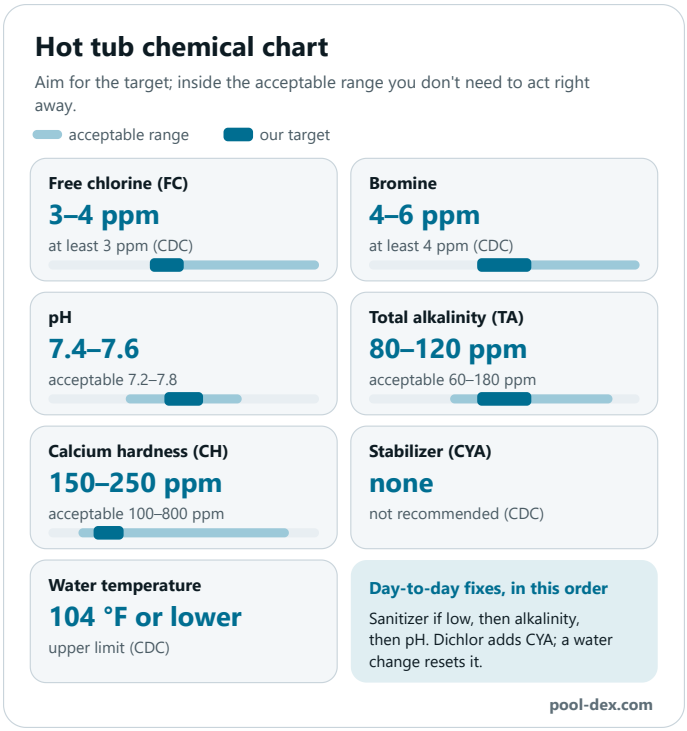
Hot tub chemistry chart

Ideal levels for chlorine and bromine tubs.
Print it and keep it next to your test kit.

pool-dex.com/hot-tub/hot-tub-chemistry-chart/

Updated November 12, 2026



Chlorine: at least 3 ppm (CDC), and soak only at or below the limit on your label (often 4 ppm). Bromine: at least 4 ppm (CDC).

Fix in this order

1. Sanitizer, if below the minimum
2. Total alkalinity
3. pH
4. Calcium hardness

One product at a time, jets running, 30 minutes apart. Retest before the next step.

Out of range: first move

Reading	Too low	Too high
Free chlorine	Add chlorine to 3–4 ppm before soaking	Cover off, jets on; wait until it is at or below your label's limit
Bromine	Open the floater a notch; shock to reactivate bromide	Remove the floater, cover off; partial drain if urgent
pH	Soda ash (pH increaser), after checking alkalinity	Dry acid (pH decreaser)
Total alkalinity	Baking soda	Acid plus aeration, in rounds
Calcium hardness	Calcium chloride, dissolved first	Drain part of the water and refill
CYA (stabilizer)	Target is zero	Only draining removes it
Temperature	—	Turn it down to 104 °F or lower

Active sanitizer by pH (CDC model code): chlorine about 70% at pH 7.0, 50% at 7.5, 20% at 8.0; bromine about 94% at 7.5 and 83% at 8.0.

Routine

When	Task
Every soak	Test and top up sanitizer; leave the cover open 30 min after dosing
2–3 times a week	Test sanitizer and pH when the tub is not in use
Weekly	Test alkalinity and pH; shock; rinse the filter; wipe the waterline
Monthly	Soak the filter in cleaner; test calcium; clean the cover
Every 3–4 months	Flush the lines, drain, clean the shell, refill, and start up

Test log: date ___ sanitizer ___ pH ___ TA ___ CH ___ date ___ sanitizer ___ pH ___ TA ___ CH ___

Safety. Never mix chlorine with acid, or two types of chlorine. Add chemicals to water, never water to chemicals. Store acid and chlorine apart, locked, cool, and dry. Always follow the product label. It is a violation of federal law to use a pesticide product in a manner inconsistent with its labeling. Keep the water at 104 °F or lower (CPSC). Poison Control: 1-800-222-1222.

Sources: CDC Home pool and hot tub water treatment and testing; CDC Model Aquatic Health Code 2024 Annex; ANSI/APSP-11 (PHTA); Taylor Technologies K-1005 manual; U.S. Consumer Product Safety Commission. Targets and formulas: pool-dex.com/methodology/. Pooldex is free for iPhone in the App Store. General information, not a product label.