The Importance of Water Testing

based on:
NPC Technical Bulletin #1 – Testing Fill Water

Pool Maintenance 101

As we all know, tap water quality isn't always the best – for drinking, cooking, bathing, or even for washing your car or clothing. Tap water is also not always ideal for your swimming pool!

Tap water conditions across the nation are constantly changing, so it's important to know what's in the water *before* you fill your pool. Depending on where you live, drought conditions, extreme flooding, acid rain, or alternative water sources, such as trucked-in water, can alter the water's chemistry – and can damage your pool.

Step 1: Testing the Water

With such as investment of time and money in your brand new or remodeled pool, it makes sense to know that the fill water will not damage the new pool surfaces and grout and ruin expensive filtering equipment. We cannot stress this enough…. ***test the water!***

The *National Plasterers Council* (NPConline.org) recommends testing pool water before (and immediately after) filling the pool. Test results will reveal what steps are necessary to prevent corrosion, scaling and staining issues before they can get started. It is commonplace for pool builders, and pool servicing companies to routinely pretest pool water as an essential part of swimming pool maintenance, and to protect your investment, you should too!

Know what's in your pool water!
Four main water conditions can damage pool surfaces, especially newly applied pool plaster:

1. ***pH Level**** – A low pH level means the water is acidic, which can cause deterioration or etching of pool surfaces and damage pool equipment and grout. A high pH level means the water is alkaline, and can cause mineral build-up, mineral scaling, or discoloration of pool surfaces.
    *Water with a pH of less than 7 is considered acidic; a pH greater than 7 is considered base, or alkaline.

2. ***Alkalinity*** – This is the water's ability to neutralize or 'buffer' the water against small additions of acid (or small drops in the pH level) in the pool. Maintaining the proper alkalinity level protects your finish from damage.

3. *Calcium Hardness* – Basically, this is how much calcium is in the water. Too much, can cause mineral scale to form on the tile and finish. Not enough, can cause damage to the finish. Maintaining the proper level of calcium hardness protects the pool's surfaces from deterioration, mineral scaling, or staining.

4. *Metal Staining* – There should be no elevated levels of dissolved metals in the water like copper, iron or manganese, which can stain and discolor pool surfaces and grout.

Test Kits – Always use an industry approved pool water test kit that has the capability to test for total chlorine, free chlorine, pH, total alkalinity, calcium hardness, and cyanuric acid. Specialty test kits are available for common metals in the water, or you can take the water to your local pool supply store.

Step 2: Treating the Water

Whether your pool water has low/high pH, low/high alkalinity, low/high calcium hardness, or elevated metal levels, pool water treatments are readily available to restore each to their proper levels. Identifying the issues and making the necessary corrections by *treating the water proactively* will prevent damage to the equipment and protect your pool's interior finish from mineral scale, etching, corrosion, and staining.

The NPC's "Swimming Pool Start-Up Procedures" (found on our website: www.npconline.org) gives the recommended levels for each water chemistry parameter, as well as the recommended procedures to follow for testing the water and remedying your water issues. Once your pool water is in balance, be sure to monitor and maintain a balanced water chemistry on a regular basis. If you don't have the time or ability perform these tasks, no worries…. A pool service professional can get the job done for you, so you can enjoy your pool with family and friends and say, "Come on in, the water's fine!"

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