

Wrinkling of Vinyl Pool Liners

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The wrinkling of vinyl pool liners, particularly the side wall areas of the liner, has been the subject of many field complaints experienced by vinyl producers. It is suspected that improper chemical treatment, leading to improper chemical balance, is the cause of this problem.

In a test study subjecting commercially available vinyl samples to rigorous water sanitizing conditions, it was determined that low pH is the most notable cause of dimensional instability in the subject vinyl samples. Regardless of the sanitizing chemical used, samples in 6.0 pH solutions showed weight gains several times that of samples in 8.0 pH solutions. Proportionally higher dimension increases, although representing a small percentage of initial dimensions, readily account for the liner wrinkling observed in certain pools.

The wrinkling of the vinyl is caused by changes in the dimensional stability due to a suspected highly acidic environment.

The pH of pool water must be maintained at the highest practicable level; a range of 7.4 – 7.8 is desirable. Acidic levels (below 7.0) must be avoided. To minimize pH fluctuation, total alkalinity (buffering capacity) should be controlled at 100-150 ppm. Both **pH** and **total alkalinity** can be conveniently measured by test kits and maintained within recommended limits by the pool owner.

The best defense against wrinkling is a good offense: regular, thorough cleaning, good water circulation, and proper use of pool chemicals. When adding chemicals, less is best.

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