

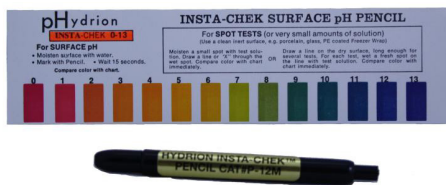
# TECHNICAL BULLETIN

## The Truth about pH

Alkaline surfaces, such as stucco, concrete and block can pose unique circumstances when it comes to properly preparing and painting these substrates. All masonry surfaces, because of their composition have some level of alkalinity, or pH reading, and require special primers that can tolerate higher pH levels. But what is too high? What kinds of issues or failures can high pH surfaces cause, and what is the best method of dealing with high pH surfaces?

### What is pH and how is it measured?

Potential of Hydrogen, or pH, is a measurement that reveals whether a solution is acidic or alkaline. A scale from 0.0 to 14.0 is used to measure pH, with 7.0 being neutral. A reading above 7.0 indicates alkalinity and a reading below 7.0 indicates acidity. As was stated previously, masonry surfaces are alkaline by nature, and require special attention prior to painting. The proper tool to measure pH on masonry surfaces is a pH pencil. It is a simple test that can be performed by squirting distilled water onto the masonry surface and then scratching the dampened area with the pH pencil. The scratch mark will immediately change to a color that should be compared to the pH scale provided in the kit.



### What problems do high pH surfaces present?

The two primary paint related issues with masonry that are attributable to high pH are efflorescence (white, fuzzy salt deposits on the surface) and alkali burn (blotchy or faded color on the surface). Both issues occur as a result of moisture in the concrete and its reaction with the limes and salt present in the concrete mix. In freshly poured concrete or stucco, pH levels are usually at their highest, and can only be lowered by allowing the concrete to cure properly for 30 days. In the event a 30 day cure is not possible, a concrete primer that can withstand a pH level of 13 must be applied prior to any finish coat as this will help to minimize the risk of alkali burn occurring. The Dunn-Edwards Perfect Palette® color system also uses a unique symbol to assist customers before choosing color that may be susceptible to alkali burn. It is recommended to avoid any colors that include this symbol:



**Alkali-Sensitive:** May fade on highly alkaline masonry surfaces

A best practice is to allow masonry surfaces to cure to a pH level of 10 or lower to achieve best results.

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