Coating Fresh Cement Render

The Acryloc Wallcote® system includes several cement-based renders to suit a variety of substrates plus coatings that are applied over render to achieve attractive, durable finishes.

However, there are some precautions that must be taken when coating fresh render because the surface of the render is highly alkaline.

Why is the surface alkaline?

Cement is mixture of chemical compounds, mostly Calcium Silicates, which react with water to form a hard, strong mixture in a concrete, a mortar or a render coat.

These reactions release Calcium Hydroxide (Lime) and this is what gives high alkalinity at the surface. The surface of fresh render will be well over pH 12 as a result.

As the render gains strength over time, referred to as Curing, the Calcium Hydroxide is bound up more and more tightly into the cement matrix and the alkalinity at the surface falls.

When can we apply Acrylic Coatings?

Acrylic finishes should not be applied until the pH at the surface has fallen to 9 or lower, otherwise lime burn, colour inconsistencies and/or efflorescence of salts through subsequent texture and paint coatings can occur, as seen in the example below.



The time required for the pH to fall depends upon a lot of factors, including:

- the makeup of the render used and the amount of water added
- the suction of the substrate
- ambient temperature, humidity and air movement

The safest way to ensure a low surface pH is to wait. A good rule of thumb is a minimum 7 days for each 1mm of render thickness. ie. 28 days for a 4mm render coat.

It is possible to measure pH at the surface using some distilled water and pH Indicator paper (the local Pool Supplies shop has this).
Dampen an area of the wall with the distilled water and then apply pH indicator paper.
If the pH is 9 or lower it is safe to apply a Primer and then subsequent coatings.

Alternatively, Acryloc Primerbond Green Render can be applied after 3 days of curing. This primer is specifically formulated for application on fresh render.

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