Why do white stains on stone disappear with cleaning and then reappear when dry?

Q. I have laid kota stone on all my stairs and corridor doors. After installation, there were a few stains on the paint and concrete while laying stones. As we didn't know how to clean the stone, we used thinner and acid to remove those stains. But now the stone has white stains everywhere. When we mop the floor, it looks great when wet, but after drying it shows white stains. I need your advice on what treatment is best to remove those stains, or if there are any paints that can make the white stains black or natural black.

A. The white stains you are seeing are likely efflorescence, a white, powdery stain that appears when water in stone brings salts to the surface. When the water dries, the salts are left behind. The white stains could also be residue from the acids and thinners that were applied when you were trying to remove the original few stains. But chances are you're dealing with efflorescence, not white stains. Here's why.

Efflorescence may fade or disappear when the stone is wet, just as you described. When there is water on the floor, it temporarily dissolves the salts that are giving the stone a white appearance, turning them back into a liquid solution. Once the water evaporates again, the salts can recrystallize and the white residue reappears. If these were white stains, they would likely remain visible even when the stone is wet.

Since efflorescence can only occur if water is moving through the stone and carrying salts to the surface, the most effective long-term solution is to stop this water movement. You'll need to check for any possible ways the stone is exposed to water, such as leaks or improper drainage. By removing the water source, you can prevent new salt deposits from forming.

So, fixing the moisture stops *new* efflorescence, but what about the existing efflorescence?

Efflorescence is not chemically bonded with the stone, which is why it's usually loose and powdery. That means you can often remove it by just brushing it away. The dry brush method is the simplest, gentlest way to remove efflorescence, and it's often the best first step before trying anything stronger.

To do this, wait until the stone surface is completely dry. Use a stiff-bristle brush, either nylon or natural bristles, but avoid metal brushes since metal can scratch or leave marks. Brush the area in one direction to sweep the salts off instead of grinding them back into the pores. Once finished, sweep or vacuum up the powder.

Keep in mind that efflorescence can return if water is still moving through the stone, since new salts will continue to be carried to the surface. It may take days, weeks, or even months for all of the moisture to exit the stone.

You may discover that some people suggest using acidic cleaners like vinegar, muriatic acid, or specialty stone cleaners because acids or stronger cleaning solutions can quickly dissolve salts. This may be true of some surfaces, but not a calcium-based limestone like kota. The calcium carbonate content reacts strongly with acids, resulting in etches, dullness, or permanent damage to the stone's surface. Plus, the salts can just come back, like with dry brushing.

The best path forward is patience and prevention. Keep the stone as dry as possible, brush away deposits as they appear, and give the moisture inside the stone time to work its way out. With proper care and by avoiding harsh chemicals, your kota stone can gradually return to its natural beauty.

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