How to restore discolored porcelain tile after an anti-slip treatment?

Q. My porcelain tiles were very slippery (dangerous) when wet, so I used a product to make them more slip-resistant. It worked, but now I have several tiles with 5 or 6 droplet-like stains that I can't remove. The anti-slip product contains hydrofluoric acid (40g/liter), and the manufacturer said the stains may have come from droplets left on the surface too long without being mopped up. Is there anything that can remove these stains and return the tiles to their original state?

A. It sounds like you've taken a reasonable step to make your porcelain tiles safer when wet, which is important. However, as you've noticed, products that increase slip resistance often work by chemically etching the tile surface. In your case, the anti-slip product you used contains hydrofluoric acid (HF), which is extremely aggressive and can permanently alter the surface of both natural and manufactured stone, including porcelain.

What likely happened is that the acid was not fully neutralized or rinsed quickly and thoroughly enough, and a few droplets or some residual product continued to react with the tile, leading to visible discoloration or "etch" marks. These discolorations are not surface-level, so basic cleaning methods won't be effective. Technically, they are not "stains" in the usual sense—they are areas on the surface that have been chemically damaged.

You have a few options:

- Should you decide to **hire a stone and tile restoration professional**, they may be able to spot-polish the affected tiles. This involves mechanically resurfacing only the damaged areas to reduce or remove the marks. However, it's worth noting that polishing porcelain tile is difficult and requires specialized tools and experience. And,

importantly, polishing will reverse the slip-resistant surface, making the tile slippery again in those areas. So, if you go this route, understand there will be a trade-off between aesthetics and safety. To find a vetted PRO in your area, visit www.surfacecarepros.com and click on **Find a PRO**.

- A **poultice application** may help draw out any remaining residue or light discoloration if the etching isn't too deep, but it will not eliminate etch damage. Start with 20 volume hydrogen peroxide (that's 6% strength), which you can find at beauty supply stores. Mix it into a paste using a dry medium like diatomaceous earth, poultice powder, or even plain white flour. Spread the paste over the stained spots, cover with plastic wrap (taped down), and let it sit for 12 to 24 hours. Remove, rinse thoroughly, and repeat if necessary. If you don't see improvement, you can try 40 volume peroxide (12% strength), which is stronger but should be used with caution. For detailed, step-by-step instructions on how to mix and apply a poultice correctly, check out our free Stain Management App.
- If neither option fully restores the tile to its original look, you may choose to **live with the aesthetic trade-off** in favor of keeping the floor slip-resistant and safe—especially in wet areas like bathrooms, kitchens, or entries. Just be sure to clean it with pH-neutral, non-abrasive products to avoid additional surface wear.

Other options include covering the blemishes with a rug or replacing the entire floor. Unfortunately, there's no product that can truly "undo" hydrofluoric acid etching. Once the surface has been physically altered, it's permanent unless mechanically restored. Also, any effort to fully restore the original sheen will likely reduce the slip resistance, which could reintroduce the original safety concern.

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