

Water-Based Impregnators: How to Remove Rainbow-Colored Film

Why Water-Based Impregnators Leave a Rainbow-Colored Film

If your idea of fun as a kid was going outside with a bottle of bubble solution and a wand, it probably wasn't long before you noticed a weird phenomenon where a swirling rainbow effect would appear on the surface of each bubble. This effect, called "thin-film interference" can also be seen in oil slicks on pavement, and unfortunately, on stone floors and surfaces after a water-based sealer has been applied.

.Fred Hueston, Chief Technical Director of Surface Care Pros and owner of [Stone Forensics](#) explains, "Sometimes, when a water-based penetrating sealer is applied to a marble floor, it leaves a very thin film on the surface that has a rainbow color to it. This is a common problem with water-based impregnators that contain sodium methylsiliconate." Ironically, methylsiliconate, the component that provides protection against discoloration, in this case is the cause of the discoloration.

For anyone with a curious, scientific mind, here's an explanation of why this happens. When light waves reflect off both the top of the sealer and the bottom of the sealer, the reflected light waves interfere constructively. This means that the light waves amplify each other creating an iridescent light, sort of like two waves in the ocean coming together to create a bigger wave.

So what can be done about this problem?

If you have not yet applied sealer, here are a few ways you may be able to prevent or minimize the rainbow appearance:

- Avoid over-application
- Use a matte or satin finish rather than a high gloss finish
- Dry buff after application

Hueston explains, “When using water-based impregnators, it is very important that you do not let the solution dry on the surface. This film is sodium carbonate and is very difficult to remove. Make sure you dry buff the stone immediately after applying.”

If you have already applied the sealer, Hueston says, “The film can only be removed by re-polishing the floor with polishing powder and a buff colored pad. If the film is really thick it may need to be honed off.”

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