

# Granite sealers

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It seems from some of the questions you have answered that you do not seem to favor sealing black granite...can I ask why not as my friend, whose place I am house sitting seems to have sealed granite counter tops I see you have asked if people are sure their granite has been sealed and not just had some impregnator used...how can one tell the difference? These counter tops do seem to have been sealed and I was wondering how they could be resealed as I have found a small chip in one place. Thanks

Dear John:

Your question has been answered several times already.

“how can one tell the difference?”

There's no difference. There's no such thing like a sealer for granite that's is not an impregnator. Black “granite” is way too dense to absorb anything and therefore it can't be technically sealed. Read this:

## DEFINITION OF SEALER FOR STONE

For starters, when referred to stone the word sealer is wrong. Well, technically it is not, but the reason why I said that's wrong is because sealers for stone are totally different from any other sealer that most people are familiar with. A sealer is perceived like a topical coating of sorts that's meant to protect the surface of the sealed object from traffic and spills, to produce a finish (polished, or matt, or satin) and to fill all little nicks, fissures and other surface imperfections.

A sealer for stone is none of that “None!

And that is why I said that the word sealer is wrong when referred to stone. The right word is **impregnator**.

An impregnator is a below-the-surface (of the stone) sort of sealer. It's a product made of two major components: a resin of sorts that could be silicone, siloxane, silane, ester epoxy, aliphatic fluorochemicals, acrylics, etc., plus a carrier, that could be a petroleum-based solvent or simply water. The resin is dissolved by and within the carrier.

What does an impregnator do, and how does it work?

The only thing that an impregnator does is reducing dramatically the natural absorbency rate of the stone by somehow filling the spaces between the single molecules of minerals composing the stone, which are known as **pores** - End of the list of performances. This reduction of absorbency rate (or porosity) of the stone will make so that possible staining agents that may get spilled on the stone will be kept at bay on the surface of the stone for a period of time much longer than if the stone was not sealed.

The way it works is that the solution goes inside the stone, the carrier (solvent or water) evaporates and the resin stays

in and cures, thus partially clogging the pores of the stone.

**The most important phase of the application of an impregnator is the total and thorough removal of its residue that was not absorbed by stone from its surface, before it has a chance to dry, so that at the end of the sealing job the surface of the stone is as bare as it were before the sealing procedure was started.**

The immediate, obvious consequence of that is we're not talking about a *coating*, but rather an *application*.

Next, the question is: how does an impregnator go inside the stone?

Quite simply, by being absorbed by it.

So far we've learned a couple of important things: 1. That a sealer for stone only help preventing deeply imbedded stains by delivering a reaction time, which is how much time you'll have to blot the staining agent off of the stone surface before it begins to sink in. (The better the quality of the impregnator in relation to the stone to be sealed, the longer the reaction time will be.) 2. That because of the way it was designed and works it cannot "and in fact does not" offer any protection or improvement whatsoever to the stone surface.

Next, we have now to talk about the natural absorbency of stone.

This side of single-crystal rocks (i.e.: gemstones), every multi-mineral stone is somehow porous. However, while there are stones that absorb liquids like sponges, there are stones that are naturally so dense that no liquid is thin enough to be absorbed by them. The latter types of stones "which are quite a few" can't be technically sealed, because no impregnator will ever stand a chance of being absorbed by them. On the other hand, since they won't absorb any liquid, it is pretty intuitive that they will never get stained.

What is interesting noticing is that while certain stones have an absorbency rate that indicates their ability to absorb liquids (above 0.2%), in fact they don't absorb anything due to their dramatically increased surface tension once polished. For example, travertine is rated at 0.4% to 1.0%. In its rough form it does absorb liquids, though slowly; but if you polish it, it effectively will not absorb a single drop of anything. In fact, nobody ever reported any stain on a polished piece of travertine. (In its hone-finished form, however, travertine may "and just *may*" absorb something.)

In conclusion, only a certain number of stones can be sealed and, more importantly, the performance of an impregnator is only limited to the reduction of the stone natural absorbency rate if it is "even when polished" above the 0.2% cut off point.

How does the average consumer know if their stone could be possibly sealed without that kind of information? It is quite simple and down to earth: spill some water in a couple of spots of the stone to be tested, let it dwell for 10 minutes or so, wipe it dry and observe if the areas under which the water has been sitting have become (temporarily) any darker than the rest. If so, if the stone is installed in an environment where staining spills are likely (i.e.: a kitchen) the application of a good-quality impregnator is recommended. If not, or if the stone is to be installed where the likelihood of spillage is minimal or nil altogether, it would be a totally useless exercise that will only help to put the kids of the impregnator's maker and its distributors through college.

And now, specifically about black "granite", read this:

## **BLACK ABSOLUTE GRANITE**

Let's start by saying that the only black mercantile granite that has the legal right to be called "Black Absolute" is the one coming from South Africa. However, in real life, when one mentions "Black Absolute Granite" one's talking about a huge variety of stones coming a little bit from all over the planet, each and every one of them not a geological granite by a long shot, and each and every one of them with different characteristics. If that wasn't confusing enough, each and every one of them are processed with even if so slightly methods " which again can make a difference.

There used to be three possibilities to explain the problems that you are experiencing, which are here listed in order of probability (the first being the most probable):

1. The fabricator applied an impregnator/sealer to it believing that it's granite. No impregnator/sealer will ever be absorbed by black granite; therefore it won't do the first thing about doing what's designed to do, which is prevent stains. (What you have are NOT stains, and no impregnator/sealer on the planet can prevent those.) Many a sealer turn out to be sensitive to acids; hence the "mysterious etching." Not on the stone, rather on the sealer that had no business being there.
2. The slab had been "doctored" by the factory by applying some sort of black shoe shine in order to make it "blackier" and, therefore more "sellable." After a while the "shoe shine" will begin etching as it gets eaten away by acidic spills. The true color of the stone is dark gray.
2. It is one of those as-rare-as-a-white-fly "mutt" stones with some traces of acid-sensitive minerals in it. In this case it is actually the stone that gets etched.

In the last couple of years there's been a change in the scenario above. Another possibility has entered the scene:

4. Certain manufacturers apply some sort of protective wax to the slabs. It is not actual "doctoring," since there's no alteration to the color of the stone, but the result is the same as if the slab had been "doctored" with the "shoe-shine."

Finally, case 3 above is not as rare as it used to be anymore. At least a couple of "Black Absolute Granites" allegedly from India and China entered the scene recently and are terrible "mutt" stones. Since they are cheap (to the importers) they push them like crazy at full black absolute granite prices.

Having said all that, the remedy to the points 1, 2 and 4 is to remove whatever it is that's sitting on the stone surface, by either stripping it chemically by soaking it with a solution of water and phosphoric acid, or mechanically, by rubbing on the stone surface a polishing compound for marble (NOT for granite!) with a little bit of water.

Case 3 is terminal.

From a legal point of view, cases 2 and 3 are full-fledged consumer fraud and could be prosecuted by the law.

All things considered, black granite " which should be considered among the most enjoyable materials as a kitchen countertop " has made it out my own list of recommended stones.

Until the industry will not straighten its act up by becoming serious about the classification of all the different "granites" on the marketplace and dictate strict rules and guidelines about their characteristics and implied

guarantees to the consumers, my position is going to be that from now on.

Any questions?...

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Ciao and good luck,

Maurizio Bertoli

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