What is stone sealer?

Q. Can you please provide some definition of Sealer for Stone?

A. Excellent question! For starters, when referring to stone, the word sealer is wrong. Well, technically it is not, but the reason that it is wrong is because sealers for stone are totally different from any other sealer that most people are familiar with. A sealer is perceived to be a topical coating of sorts that is 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!

That is why 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 is a product made of two major components: a resin of sorts that could be silicone, siloxane, silane, ester epoxy, alphatic 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 reduce 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.

This reduction of absorbency rate (or porosity) of the stone will make it so possible staining agents that 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 were 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 was before the sealing procedure was started.

The immediate, obvious conclusion 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 helps to prevent deeply imbedded stains by providing a window of 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. 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 to talk about the natural absorbency of stone.

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 to note 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 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 impregnators maker's and its distributors through college.

Answer provided by natural stone expert, Maurizio Bertoli.