**Stone Impregnating Sealers are not Bullet Proof**

By Frederick M. Hueston

I receive several calls a week with questions on the use of impregnating type sealers for use on outdoor stone as well as interior wet areas such as showers, water fountains etc. The question is simple: Should I seal my stone in these conditions. The following article will provide a reason why stone in wet areas should not be sealed.

Before we discuss the reason why we shouldn’t stone in these conditions a few definitions are necessary

**Impregnators or penetrating sealers:** Impregnators are designed to penetrate below the surface of the stone and deposit solid particles in the pores of the stone or to coat the individual minerals below the surface of the stone. Water, oil and dirt are restricted from entering the stone. Impregnators can be solvent, or water based. Most impregnators are vapor permeable.

**Vapor Permeable:**  breathability, **vapor permeability** describes a stones ability to allow water **vapor** to pass through it.

**The case for not sealing stone in wet environments**

When stone is exposed to unregulated humidity and temperature fluctuations, like it would in an outdoor environment or in a shower the air contains vapor in what we know as humidity. Temperature along with humidity can result in condensation as well.

Most of the impregnators on the market today our breathable. This simple means that the stone will be protected from water entering the pores of the stone in liquid form but will allow water vapor to pass.

In an wet environments vapor can be present for several reason, rain, high humidity, temperature fluctuations, steam etc. Since these impregnators are breathable this vapor can easily penetrate into the stone. One would think that this is a positive. The fact is that once the vapor enters the stone it can condense and become a liquid. Since impregnators protect against water in its liquid phase it becomes trapped within the stones pores and will not escape until it evaporates or in other words turns into a vapor. Once this water becomes trapped it can result in all kinds of problems. Stones with iron content can begin to oxidize, natural salts with in the stone can become dissolved and cause pitting and spalling. Aesthetically the stone will appear darker since it is constantly wet.

This problem is becoming more of an issue with the increase of stone being used in showers and exterior environments. There are currently several people doing experiments demonstrate that sealer in wet environments can cause these issues. I strongly believe that care should be taken when sealing stone in these wet environments.