



BURSTING THE BUBBLE MYTH

Although several different issues can arise when dealing with concrete acrylic sealers, bubble formation during and after application is one of the more frustrating. Nothing will ruin the satisfying visual of a newly-sealed decorative concrete project quite like watching bubbles form right before your very eyes or even appearing overnight. Relax a bit, because there is hope!

Bubbles are caused due to the air that exists in the voids of all concrete. Those voids increase in volume as the temperature of the slab increases, causing it to expand. As this expansion occurs, air follows the path of least resistance and flows out through the surface and pushes into the thickening acrylic on the surface. Thereby causing bubbles. In fact, applying sealer early in the morning, will actually increase the risk for bubble formation. This is especially true in spring and fall weather when day and evening high and low temps are more extreme. If you've ever applied sealer early in the morning on an area that's partially shaded and partially in direct sunlight, you can see a clear-cut line of bubble formation between those two areas. Simply stated, the areas are not undergoing the same thermal expansion from the heat being pumped into the concrete from the direct sunlight vs. the shaded areas. So, when applying in extremely hot conditions (100°+), you just have to account for the faster dry time and work accordingly to avoid stringing (i.e. "cobwebbing") and physically inducing air into the film due to overworking as the viscosity (thickness) of the sealer rapidly increases.



I've found the best way to avoid bubbles is to apply concrete sealer when the concrete is at its peak temperature, and stable, or decreasing in temp. This keeps the air in the voids from expanding with increasing temperature. In addition, always apply as two thin coats using the suggested proper overall coverage rates from the manufacturer.



The same applies for treating bubbles, or other film issues, when they form with solvents such as Xylene. You'll want to apply the solvent when the concrete is at peak temperature or decreasing. For any areas that may have been over applied and are particularly thick, I recommend using Toluene instead of Xylene. The faster evaporation rate of Toluene allows the solvent to escape before the humidity gets too high.

When applying Xylene to a solvent based sealer, you should always make sure to apply in several "doses". It's near impossible to get enough solvent on the film in a single application to allow the acrylic to melt with the flow and leveling characteristics necessary to repair issues. Applying the solvent in several doses (30-60 seconds apart) allows each dose to melt into the film rather than puddle and run. A good way to determine when you've melted all the way through the film is a complete and uniform darkening of the concrete underneath as the solvent penetrates it.

By keeping these tips in mind when applying concrete sealers, you can enjoy the benefits of your protected concrete for years to come!