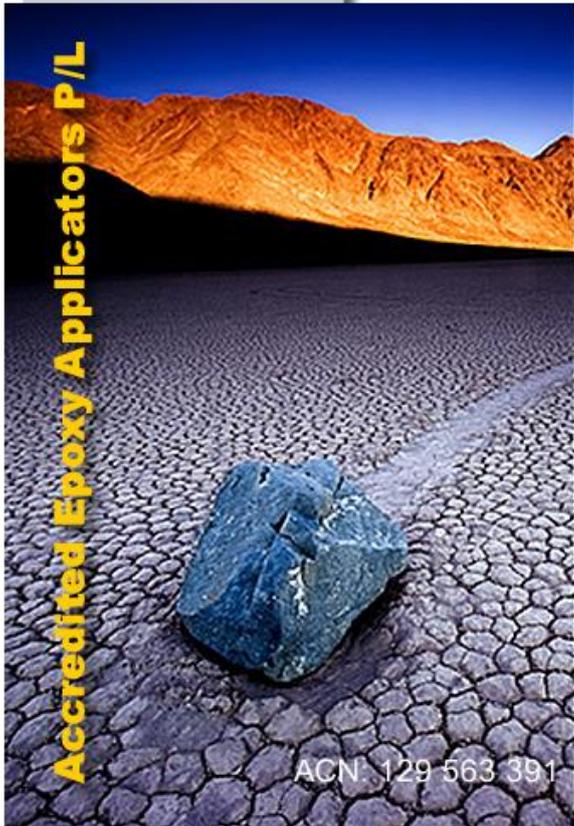


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Why Epoxy Floor Coating Fails!!

There are many reasons why epoxy floor coatings fail to stick to their applied surfaces. Too often the blame and responsibility is placed on poorly explained surface preparation, which also fails to provide suitable answers. Correct surface preparation is critical to coating success, but coatings can still fail despite the best preparation.

Here are the main adhesion problems:

Water: Water in the concrete is a major cause for premature epoxy floor coating failures. Concrete tends to hold and retain water for a much longer period than most people can or will wait prior to coating. Floors can have dry areas and damp areas, including some damp areas that never dry out. Touching the surface to test for dryness can be a misleading method for determining moisture.

Humidity: High humidity can be as detrimental as moisture. Many coating products do not recommend applications when humidity's exceed 75 or 85 percent.

Moisture flow: Migrating moisture, as opposed to simple standing water, creates a more difficult problem. The common sign of this kind of failure is water filled blisters. Just a tiny amount of 'flow' pressure under a still curing coating can ruin the bonding process still taking place. There is no good answer here, but rapid drying/curing coatings have a better chance of working.



Dust and dirt: A layer of dust, dirt, or grease is not going to aid coating adhesion. The coatings stuck, but to the dust and dirt on the floor instead of to the floor itself. The applicator will need to decide how much time and effort to put into surface dust removal.

Salts: Salts and/or minerals either deposited out on the surface from the curing of fresh concrete, or from the evaporation of seawater on concrete can quickly ruin a coating. For starters the salts work like dust and other contaminants getting between the coating and the surface. Without moisture, salts tend to form crystals, which can interfere with bonding.

Grease-oils-silicones: Few, if any, coatings stick to greasy, oily, waxy surfaces. Oily surfaces can be tricky. Even on what seems like a non-greasy surface, many coatings will 'bead-up' leaving behind hollow, coating less circles or voids. Hosing down, high-pressure water, and even grit blasting, is no guaranty that greases will be removed, indeed, they will probably stay behind. Greasy, oily surfaces require a degreasing chemical to remove the residue.

Porosity: Some coatings tend to be quite porous, permitting moisture, chemicals, etc. to invade the coating and attack both the coating and it's bonding interface. Some epoxies are more porous than other kinds of epoxy.

Brittleness: Many coatings will fail because they cannot handle the expansion/ /contraction (or movement) of the underlying surface, or they crack when struck. Once a coating cracks, even a tiny micro fracture, that crack becomes a pathway for moisture and corrosion. It is the beginning of failure for the coating.

UV: Ultra-violet radiations from the sun, UV, will breakdown most coatings. Epoxies tend to yellow and chalk, other coatings, such as plastics, get brittle and crack. After too much UV the coatings will fail.

