

Prior to painting your floor: **PERFORM A MOISTURE TEST.** If you sometimes see tiny crystals or white powder on your floor, or the concrete feels damp, this is moisture migrating through the slab which will often cause peel up of any kind of coating you apply. To perform a moisture test, simply put a rubber mat on the floor or tape down a 3 by 3 ft (or so) sheet of plastic. Wait overnight. If water collects between it and the floor there is a potential moisture problem and any floor paint will probably not cure/dry properly or will bubble up and peel away. If the moisture is mild, you can primer the substrate before applying your basecoat to make sure you won't have adhesion issues. If the moisture is severe, it is not recommended to apply a coating.

**PERFORM THE SEALER TEST** If your concrete has been treated with some sort of cement sealer (waterproof) no epoxy will stick to it. To perform a sealer test you'll want to pour water on the cement. It should soak into the cement in a reasonable time. If it beads up or just sits there for a long time, the concrete has been sealed or could be grease-or-oil contaminated. The Etch N' Clean solution *nor* muriatic acid will be able to cut through a sealer. The floor must be grinded or shot blasted to cut through the sealer to allow proper adhesion.

## ETCHING IS A CRITICAL PART OF THE PROCESS

Concrete floors require preparation before applying an epoxy coating system. The preparation usually involves cleaning the surface to remove oil and other unwanted contaminants **and** "profiling" the concrete by etching with acid *or* by mechanical abrasion (ie; shot-blasting or etching with a diamond grinder). If the concrete is new or does not have heavy oil contamination **it still needs to be etched.** The rougher the better. Thin build systems (waterborne epoxy) are best prepped by using an acid etching or diamond grinding.

The key here is to open up the pores of the concrete so the epoxy has something to sink into. The Original Color Chips Floor Coating System **Etch 'n Clean** will provide both the cleaning and the profiling in one operation. If the concrete is profiled to resemble 100 grit sandpaper or more coarse you are ready to coat. If the concrete is trowelled to a glass-like finish you may have to etch multiple times to get the surface to the right texture. In the case where you will need to etch the concrete again, Muriatic Acid is a more aggressive acid that should be considered. Though much less user-friendly than our etch n' clean (note: it does not have a cleaning agent so we advise using the Etch 'n' Clean prior to Muriatic Acid). If you need to use the Muriatic Acid; use with caution. Follow the tutorial at our website: [http://www.originalcolorchips.com/images/muriatic\\_acid\\_instructions.pdf](http://www.originalcolorchips.com/images/muriatic_acid_instructions.pdf).

**REMEMBER: No matter how new OR clean the concrete is, it will need a rough textured surface in order to achieve maximum epoxy adhesion. Each gallon of Etch N Clean has to be diluted with 50% Water for proper cleaning on the concrete substrate.**

### ETCHING USING THE ORIGINAL COLOR CHIPS ETCH 'N CLEAN

#### Equipment

- Plastic sprinkling can or plastic garden sprayer
- Push broom with stiff bristles (natural or synthetic)
- Water for rinsing (hose with high pressure)

#### Optional Equipment

- Long-handled squeegee
- Wet-dry Vacuum

#### Usage Tips

- Work in 10'x10' sections. Working in larger sections may prevent rinsing before the solution begins to dry resulting in white powdery residue.
- If available, use the squeegee or wet-dry vac to remove the etching solution before rinsing.
- Do not apply the solution with a mop. Mopping smears the solution over the surface and does not apply enough solution uniformly for effective etching.
- We recommend using a stiff bristle broom and scrubbing the pores of the concrete as you pour out the solution.

#### Method

1. Dampen a 10'x10' section. A little water on the surface helps activate the etching solution.
2. Dilute 1 gallon of water to 1 gallon of solution. Apply the Etch 'n Clean solution so that a uniform film covers the section to be treated. (*your 2-gallon mixture should cover around 500 sq/ft*)
3. Allow 5 minutes contact time.
4. Using a stiff-bristled push broom, scrub the solution into the floor working in one direction and then scrub across the surface at 90° to the first direction.
5. Allow the solution to remain on the surface for an additional 2-5 minutes. (*Do not apply the etch 'n clean on an area larger than you can rinse off in 10 minutes, it is advisable to work in small areas at a time*)
6. Saturate the surface with water to neutralize the acid. If available, use a squeegee to remove the etching solution before rinsing. Otherwise, rinse using plenty of water. Scrub the surface while rinsing to insure complete removal of the etching solution. If you have a pressure washer use it to thoroughly rinse the surface.
7. Move to an adjacent area and repeat the process.

#### Troubleshooting

1. A white haze, white streaks or white, powdery dust on the surface after drying is caused by waiting too long before rinsing or by inadequate rinsing. The white powder is a combination of cement particles released from the surface and a precipitate byproduct of the etching reaction, insoluble calcium phosphate. Remove as much as possible by sweeping, scraping or vacuuming. A light dusting typically will not show through a clear coating and will not affect adhesion.
2. Look for areas on the treated surface that are darker or shinier than the rest of the treated surface. Water beading or breaking on these areas signal that the surface is not ready for the coating application and should be treated again.
3. If water soaks into the treated surface without beading or breaking and the surface has the degree of profile specified by the coating manufacturer, the surface is ready for the coating application.
4. Neutralizing the surface after etching is not required because Etch 'n Clean is self-neutralizing. Once the bubbling stops, the remaining mildly acidic solution is easily removed by thorough rinsing.