

ICT Reactive Sealers

Tips and Tricks that can increase Optimal Application and Performance

1. Processing:

- a. Opening the surface of the concrete, allowing for penetration of the sealers is necessary for Reactive Technology Sealers to work. Removing the casting residue, breaking the cream barrier on cream finishes, and allowing the sealer to soak in is the best way to get Reactive Sealers to chemically alter the surface of the concrete.
- b. Muriatic and Acetic acids are recommended when using dilutions of water to acid scrub the surfaces of the concrete. Acid scrubbing the surfaces of the concrete will create a profile to the concrete that is recommended, recommended for soaking of the sealers as well as durability of long term wear.
- c. Do not use neutralizing agents after the acid wash, scrub the surface with clean fresh water only.
- d. **WARNING: Muriatic acid alternatives are not recommended to be used with ICT Reactive Sealers. The Acid alternatives, "green acids", will alter, weaken, slow, or halt all together the repellent nature of the sealers. These alternative acids will prevent the sealers from developing the treatment reactions they are intended to do, which will lower overall repellency, resistances, and hardness of Reactive Sealers. It is advised to avoid the alternative acids, known as green acids, or Muriatic acid alternatives.**

2. Heat: There are many ways form of heat can be used to improve Reactive Sealer application and performance

- a. Warming the concrete.
 - i. Warming the concrete opens the pore structure. Reactive Sealers are mostly penetrating based sealers. Reactive sealer will absorb and react very well with the most open pore structure. Concrete moves with temperature, expands when warmed, contracts when cooled. Warming the concrete increases the potential for penetrating the sealers deepest into the pore structure.
- b. Warming the sealer:
 - i. Setting the sealers in a warm water bath, to keep the sealer warm during application helps reactive sealers absorb and lay out nicely. Warm water batch help keep the sealer at similar temperatures as the concrete itself, making the application and reaction efficient.
- c. Torch Technique:
 - i. Using a weed torch or roofing torch between applications, can be a great way to set the sealer quickly and efficiently. Using a torch to "chase the vapor" between application is a quick and easy way to speed the dry time between applications.
 - ii. www.Flameengineering.com, roofing torches.

3. Using water or acetic acid to speed early activation of the resistance and repellency:

- a. ICT Reactive sealers are reactionary, meaning the more they are used the better the resistance and repellency becomes. During the application process there are a few ways to take advantage of the early activation using water (and or) acetic acid.
 - i. Before the first application of Prime, generously wet the surface with water or diluted acetic acid.

ii. Between applications wipe the previously dry application of sealer with water or diluted acetic acid. Allow the surfaces to darken, then let dry before proceeding to the next application.

Note: With darker colors that have Red Oxide or Yellow Oxide in the formulas, use only water as part of this step and avoid acetic acids which can dull the color blends that have Red Oxide or Yellow Oxide in the color formula.

- b. Wetting the surfaces 12 to 24 hours after the final applications of sealers are applied, will accelerator repellency and resistance .
- i. Spray the surfaces with water, effectively saturating the surface. Using a saturated microfiber cloth, or any saturated cloth, wipe the surfaces with the water for a good 5 to 7 minutes. The surfaces should darken, if you feel the water it will begin to feel a bit slimy as the activation of the sealers begin to kick in. The surfaces will transition from the water, basically, laying out on the surface to the water beading on the surface like they have been freshly waxed. This activation takes about 5 to 7 minutes.
 - ii. Once the time is finished, wipe the surface clean. You have done the first progressive step to increasing the early resistances of the surfaces.

4. Combining heat and water wipes during the applications:

- a. By combining the accelerating techniques together can optimize early repellency and resistance. This is referred to as Apply-Torch-Soak technique.

1. Apply application and allow to dry
2. Torch to chase the vapor, locking the sealer application. This is done right after the application has dried.
3. Soak, have a small bucket with water, or diluted acetic acid, with a cloth soaking in the bucket. Pull the saturated cloth out and soak the surface with the cloth. After soaking, wipe the remaining wet residue off.

Apply-Torch-Soak

5. Applicators:

- a. ICT Reactive Sealers are designed to be hand applied. Applicators with microfiber work best to apply thin applications with even pressure from your hand. It is best to have an applicator that is about the size of your hand, (6"-7"x4"-5"x1") (17cmx13cmx7cm). It is best to have an applicator that is thin and not bulky. Thicker applicators have a hard time applying even pressure, uneven pressure will leave application marks, (streaks), in the finish.
- b. Rollers work well for the Priming and Sealing applications, using 6" or 12" HD rollers work best for laying the materials on. Using A white Scotch Brite pad to spread the fresh sealer over the surfaces of the concrete works best to leave a robust amount of sealer ready to be back rolled. Use back roll techniques to keep the final application thin.

6. Priming applications:

- a. A tip I learned a long time ago is to use a quart bottle or quart container to pour out the initial amount of diluted sealer. The dry concrete will be thirsty when cured properly. Pouring out

the materials is by far the easiest way to keep up with the material that is soaking into the concrete. Move slowly across a piece. Start from one area and apply to that area until it acts saturated, then continue moving across the concrete keeping the surface saturated as you go.

- b. Have small spray bottles on hand with diluted sealer, once you have saturated the surface using the quart bottle pour method it is nice to then move over to the spray bottle to finish the final soaking time period.

7. Prime application timing:

- a. Typical soaking times range from 1 to 3 minutes. But, only go as long as the sealer remains fluid and water like. Once the sealer begins to thicken, or react, your time is done. Take mental note of this time, it may be as little as 2 minutes depending on the cure of the concrete, then use your soak times based on the sealer reaction time. Don't let the sealer become thick and sticky, as this could lead to a streaky application.

8. Thin to Win:

- a. ICT Reactive Sealers should be applied thin. More sealer is not better. Heavier amounts of sealer will make curing of the sealer much slower and leave a finish that is soft, easier to scratch, and easier for elements to stain.

9. Lower or Higher Sheen:

- a. ICT Reactive sealers are hardening based sealers that enhance what they are given to react with. To achieve lowest potential sheen it is best to change the way light is reflected off the surface of the concrete. Adding some amount of texture to the surface will change the way light is reflected off the surface, which will lower the sheen. Acid washing, with Muriatic Acid dilutions, is the best way to add a light texture to the surfaces of the concrete.
- b. The best way to keep the lowest sheen possible is to not buff between, or after, any applications. Buffing the surfaces with ICT Reactive Sealers will always cause a sheen pop, regardless if you are using CT-Clear or CT-Satin. This is the nature of sealer that harden and enhance the surfaces of the concrete, they can, and will, increase sheen if buffed. Avoid buffing and you will have the lowest possible sheen.
- c. HVLP fogging technique can be used to lower the sheen post application.
 - i. Using an HVLP sprayer, fog some sealer over the surfaces, letting the micro droplets fall to the surface. These micro droplets will lower the sheen, but do not consider this as an application for resistances, this is solely for aesthetics.

10. General guide to sealer cure:

- a. Sealers do not cure efficiently below about 70F. Once the environment drops below these temperatures most chemistry in sealers slow to an almost stop. This is important during winter months or cool temperature climates. Covering the concrete with heat blankets after sealing is a good way to keep the concrete and the sealer curing, if shop temperatures are cooler than the chemistry temperatures.

