ICT ChPrep and Seals Reactive Sealer INSTRUCTIONS

Introduction
ICT ChPrep and Seals Reactive Sealers are hybrid sealers utilizing the benefits of reactive penetrating sealing technology and a micro-coating technology in a two part system. This sealer provides excellent stain and abrasion resistance, requiring very minimal maintenance for years of quality use and abuse.

Before detailed instructions, let's cover some basics about sealers on concrete countertops and architectural objects in general. The conditions this sealer will see are as varied as the number of people that will put it to use. We have provided below some general guidelines about how to apply this sealer, but we fully expect this sealer to respond differently to all of the varied conditions it will face. We have done much testing of this sealer, over an extended period of time, and have seen it in used in various places in the country, and it is with positive results that we are presenting this sealer to the world. All of this leads to a very simple point: Test this sealer in your conditions!

Tools and Materials
You will need to round up some tools before you get started. Here is a list of things to have on hand:

- Small pull trigger sprayers
- Microfiber sponger
- Microfiber cloth
- Clean Water
- Timer

ICT Sealer Surface Preparation

Surface preparation before sealing is an important first step to ensure success with the sealer. You've spent a lot of time making a beautiful piece of concrete, so take a little bit more time to make sure the last and most important step goes right.

The condition your concrete needs to be in before sealing is straightforward and easy to achieve: It should be at least several days old after casting, it should be microscopically rough, clean and dry.

Curing

Concrete should be allowed to cure for several days after casting, following good concrete curing practices. This ensures the cement matrix is maturing and the internal moisture levels have been reduced to low levels. For some concrete mixes this happens in a few days, for others it will take longer; you will need to set the time between casting and sealing based on the habits of the concrete you are working with. With Buddy Rhodes mixes, 5 days following casting is a good start, although more time should be given during cooler periods, and more time is always better if you have time to give. For best results let your concrete cure for at least 1 week. Summary: If you want the best results, give it time. If you are in a rush, then don't expect the best results.

Profile

The surface of the bare concrete should be visually matte and microscopically rough. In other words, it should have a profile, or tooth, prior to sealing. This ensures the sealer develops a good mechanical bond with the surface. Before sealing, you want the concrete to have a matte finish, you don't want to see reflection in the surface, and the rougher the surface is, the better the sealer will adhere.

Profiling also removes surficial material or contaminants that would interfere with forming a good bond. Wax and form release agents routinely transfer to the surface of the concrete during casting, and these must be removed before sealing. There are several ways to profile the concrete: Etching, wet-sanding and finally honing.

Etching

Acid etching provides a 'tooth' for the sealer and dissolves any weak material in the substrate that may prohibit sealer from fully penetrating and adhering. Etching is most often performed on cream finishes, or concrete that's left untouched after it is demolded. Keep in mind acid etching mainly affects the cement paste, and will not change the surface of exposed glass, tile, or exposed stone such as quartz or granite. Etching may not entirely remove surface residue like wax or form release agents. For that we recommend light wet sanding. Muriatic acid substitutes are not recommended with ICT reactive sealers. These types of acids can cause inconsistent reactions with the sealer.

Wet Sanding

A popular and easy way to lightly work the surface without exposing sand grains is to hand-sand the surface using wet/dry sandpaper. Use 400 grit paper, as coarser grit sandpaper can leave scratches and can be too aggressive. This kind of sandpaper is the black, silicon-carbide stuff used to wet sand automotive finishes. It's always used wet to prevent scratching the concrete surface, and it's a great way to remove surface residue and to lightly smooth the concrete's surface. A wet-sanded surface can be etched to further enhance the microscopic tooth.

Honing

Honing is often done to expose the sand grains to produce a salt and pepper finish, or, after the concrete has been ground to expose stone or glass aggregate. Either way it's vital the concrete is not highly polished to make it shiny.

Clean

You'd never paint over dirt, so spend a moment cleaning the concrete before you seal. You want to do this after you've profiled the concrete, since etched, sanded or honed concrete has very fine residue that must be removed before sealing. Use a green scrubby pad to remove the fine residue and rinse well with clear water.

Dry

The concrete should be fully dry prior to applying sealer. Dry concrete lets the sealer penetrate into the concrete, whereas wet, damp or barely dry concrete won't.

Wait a minimum of 12 hours (overnight is better) for drying following saturation is a good rule of thumb. Remember, cooler shop temperatures slow evaporation, so if it's cool where you're sealing (say below 70°F or 21°C) give the concrete more time to dry out. When in doubt, give it a full day.

Environment

ICT is a Reactive Sealer that benefits from warm concrete conditions after the finish has been applied.
Ideal temperatures for sealer application are between 70°-95°F (16°-35°C). Temperatures below 65°F will slow down evaporation and the cure time of the sealer. Temperatures above 85°F will increase the chance of the sealer flashing off quickly, usually resulting in application marks.

Moisture and humidity plays an important role with the sealer. Because the sealer is diluted with water, it's important that the moisture from Priming and Finish Coat application dries out between applications. Until the water that's in the freshly applied sealer has evaporated, the sealer won't begin to fully crosslink (cure).

ICT Sealer Application

Part 1. ChPrep Primer Applications

Primer Application Technique:

Dampen a microfiber sponge or microfiber cloth with water then saturate the surface of the concrete, spread the sealer across the entire surface until it is fully covered. Liberally wipe/spread the sealer around the surface to fully wet and saturate the concrete with a clear film of sealer material. Be sure not to let the sealer puddle or dry out. The saturated concrete should have a clear thin film of sealer covering the surface.

Using a damp microfiber sponge maintain enough sealer on the surface, and continue to wipe the material gently, so that the surface remains evenly wet.

-**First Primer Application,**
Dilute 1 part ChPrep with 1 part water, use this to keep the surface wet for 6-8 minutes
-Second Primer Application,
Dilute 1 part ChPrep with 1 part water, use this to keep the surface wet for 5 minutes
-**Additional Primer Applications**
Apply full strength ChPrep for 1 to 2 applications keeping the surface wet for about 1 minute
Continuous wiping helps work the sealer into the surface and into any pinholes that may remain

Do not leave puddles of material on the surface, if excess material needs to be removed and evened squeeze out a bit excess sealer from the microfiber sponge, then use the microfiber sponge to even out the excess sealer that remains on the surface. Keep wiping continuously leaving a thin wet film of material on the surface to dry.

You will apply Primer Applications with this method, each usually within 30 minutes of each other. The second application can be done as soon as the first application has been dry for 15-20 minutes. Often this takes about 5 to 10 minutes depending upon ambient temperatures.

Wait at least 1 hour before proceeding with the finish applications. Priming using highly-diluted sealer pumps a great deal of moisture into the concrete, and it's important to let this moisture evaporate before applying your finish coats. Good practice is to be patient and wait longer (2-3 hours).

Part 2. Seals Finish Applications

The finish is applied in methods similar to the primer, except each coat of finish needs to be kept wet for only about 1 minute instead of 5 or 10 minutes. This is because the finish does not need to soak in like the primer.

Finish Application Technique:

Dampen a microfiber sponge or microfiber cloth with water then wipe surface of concrete, to achieve an evenly wet with a **thin** film of sealer. **Thin to Win**

- Apply Seals full strength for 1 to 2 applications

Wait 30 minutes between each finish coat application. Good practice is to be patient and wait longer.

ICT, like many sealers, must dry in order for it to begin cross-linking, which is critical for achieving the stain and scratch resistance it offers. Moisture in the concrete, and moisture in previous coats of sealer will slow curing, as will cold and damp shops.

The number of finish coats depends on the stain resistance required for a project. This usually ranges from 1 to no more than 3 applications: 1 applications for objects that will see average use from expected staining agents, 2 applications for objects that will see high use and exposure (kitchens, for example). Be aware that more than 3 applications building up layers of sealer that will slow the overall cure of the sealer and ultimately lower the actual strength of the sealer.

Part 3. Clean and Set

Wiping down the ICT sealed surfaces with Clean and Set will increase the early water repellency of ICT sealed surface, increase early hardness and scratch resistance of ICT sealed surface, and help dissipate any residual charges that may still be active on the freshly applied reactive sealer.

Clean and Set Wipe Down Surface Technique:

- **Dampen a paper towel with Clean and Set, wipe down the surfaces, leave the vapor residue to dry on he surface.**
- **Using a clean cloth and water wipe down surfaces to remove any Clean and Set residue**.

Give the freshly applied sealers a minimum of 1 to 2 hours to cure on their own before wiping the surfaces down with Clean and Set.