

We work with existing concrete surfaces to protect and enhance the surface. The correct placement of the concrete slab is of extreme importance for us to provide our client with a great finished surface. The following are guidelines to pouring new concrete for a Dancer Concrete Design installed floor. Finishing procedures should be consistent.

### The Mix

- To help control moisture migration and vapor emission problems on interior concrete floors, an under slab vapor barrier should be placed before the concrete is poured.
- A rich Portland cement content is integral for good stain reaction. A five or six bag concrete mix is ideal. This is enough cement for thorough reaction and produces a floor that will be around 4000 psi.
- When pouring in colder weather or needing a fast setting, only a non-chloride accelerator should be used. Calcium accelerators should not be used as this can affect the stain's color.
- Pozzolans, or cement replacements, may also affect the ability to stain the concrete. Keep pozzolan load under 10% of total cement content.
- An additive to remove moisture in cured concrete such as Barrier One has shown no adverse effects on floors that will be polished or epoxy-coated.

### Pouring & Placement

- Concrete is to be placed, floated and smoothed per ACI guidelines.
- Keep the water to cement ratio low. Overwatered concrete, especially in colder environments, tends to "pop" the surface of the concrete in winter.
- If the concrete pouring will take multiple days, the client should be informed and understand that the stain may look slightly different from pour to pour.
- For concrete that will be polished: Form control joints using an early-entry power saw using a dry-cut blade. Attach a vacuum to the saw to remove saw cut residue. The early-entry saw will minimize out-of-joint cracking due to delayed sawing, but the residue must be removed and not allowed to accumulate below the skid plate or the concrete will be discolored when cured.

### Finishing

- **Interior Concrete**
  - The surface should be power troweled smooth until no ridges are left on the surface.
- **Exterior Concrete**
  - The surface should be prepared according to client's specifications. This may involve a broom finish, rock salt finish, or smooth surface. Exterior applications should also be mindful of slip resistance of the surface and weather conditions.

### Curing

- Acrylic curing compounds should not be used on the concrete as this will not allow the products to penetrate into the concrete. A wet cure method will allow the concrete to gain the required strength and allow for proper staining. When using a wet cure method or a water-dissipating curing agent, we recommend WR Meadows 1100-Clear or compatible product.
  - For concrete that will be polished to a cream finish, use Consolideck LS as densifier.
- Placing items on the concrete surface before it is cured can result in ghosting and discoloration.

### Epoxy

- For epoxy flooring installations to begin, the relative humidity in the concrete must be below 80RH. These readings are taken by Dancer Concrete Design using Wagner RH Meters. Unless noted on the bid, all base epoxy floor installations must be below 80RH or use an appropriate Moisture Mitigation system below epoxy flooring.

## Protecting During Construction

- The concrete needs to fully hydrate and reach its required strength before staining. Staining on new concrete can typically take place 3-4 weeks after initial concrete placement.
- If the new floor is to be used during the curing period, some extra precautions must be taken. This may include installation of a protective barrier or informing other trades to care for the concrete. One way to let other trades know about the floor staining is to hang signs around the job-site informing others that the concrete will be the finished floor.
- Oil will leave permanent stains on a finished concrete floor at any time.

## Common Problems

- Due to curling in concrete floors, floor slabs may be higher than column pads. Different aggregate exposure or column leveling may be needed at an additional charge.
- Installing joint filler too soon may result in cracking of joint filler when slab shrinkage occurs after installation. This should be done 30 days after installation in a temperature-controlled environment.