

Curing Decorative Concrete

Problems and Practice #4

ACI-302.1R, “Guide for Concrete Floor and Slab Construction,” covers concrete curing, but contains little information on curing decorative concrete. Some curing methods that are suitable for normal concrete may cause problems when used on decorative concrete and, in some cases, initial curing may have to be delayed. The following considerations should be addressed in a meeting with the architect, engineer, owner, and decorative concrete contractor during the planning stages of a decorative concrete project.

CURING CONSIDERATIONS:

- Traditional curing methods, especially water curing, may cause excessive discoloration and efflorescence.
- Monomolecular films or evaporation retarders may help prevent rapid moisture loss from the surface when the concrete is still in a plastic state.
- Slabs treated with liquid membrane-forming compounds will not be able to receive an acid stain treatment or an overlayment product until the compound is removed.
- Curing paper may be better suited for interior spaces scheduled for an acid-stain treatment.
- Don’t rely on dissipating liquid membrane forming compounds to make a surface suitable for acid staining or overlays because the time required to dissipate can vary and is affected by the amount of sunlight exposure.
- Slabs treated with a powdered release agent and textured with mats are unable to accept liquid membrane-forming compounds until the release agent is washed off one to three days after the job is completed.
- Combination sealers that both cure and seal have been created that meet ASTM 1315 curing standards while providing a decorative finish. They can be applied as soon as release has been re-

moved and the surface is dry, many times within a 24-hour window. Manufacturers’ recommendations should always be followed for the specific product and or application.

- Colored concrete placements without texture have the option of colored or tinted curing agents that will help level the color over multiple pours. Time must be allowed for the curing agent to dissipate prior to the application of any traditional decorative sealer.

A different curing approach may be needed for different types of decorative concrete applications. Before the project starts, it is imperative for the construction team to be aware of the results a curing method will produce. The specified curing method should always be applied to the mock-up for the project prior to the start of the project. The mock-up should be treated with the same coloring, texturing and sealing methods to be used on the actual project. The decorative concrete contractor must be involved in this decision to ensure that the project will meet the specified requirements of the owner.

Decorative concrete contractors will work with owners and architects in developing specifications and constructing mock-ups to address their appearance requirements. If you have any questions, contact your ASCC/DCC concrete contractor or the ASCC Decorative Concrete Hotline at (888) 483-5288.

