INSTALLING RESINOUS COATINGS OVER GREEN CONCRETE

OVERVIEW

Green concrete refers to slabs that have cured less than 28 days. During this period, the slab undergoes hydration, shrinkage, and continuous moisture release. Traditional coatings cannot tolerate the elevated moisture conditions typical of green concrete; however, moisture-tolerant primers and mitigation epoxies may be used when properly specified.

Characteristics of Green Concrete

- Retains high internal moisture (RH often 90–100%).
- Rapid vapor release during early cure stages.
- Surface may be softer or laitance may still be present.
- Capillary structure not fully stabilized.

Suitable Resin Systems

- Moisture mitigation primers rated for green concrete.
- High-performance membranes with >95–99% RH tolerance.
- Early cure primers engineered for wet substrates.

Standard epoxies, polyureas, polyaspartics, and urethanes must not be applied directly to green slabs.

Installation Guidelines

1. Ensure mechanical prep to remove laitance.
2. Verify moisture primer compatibility for green concrete.
3. Apply primer at manufacturer-required thickness.
4. Ensure no standing water or hydrostatic intrusion.
5. Allow primer to fully cure before buildcoats.

Best Practices

- Expect slower cure under high internal moisture.
- Avoid solvent-based products that may blister over green slabs.
- Maintain stable temperature/humidity during cure.