Concrete Preparation Procedures

Acid Etching Concrete:

1. Clean and remove contaminants from concrete surface by pressure washing or mechanically grinding, sandblasting, or shot blasting.
2. Mix muriatic acid with water to dilute to 10% to %15 solution. Always add acid to water, never water to acid. Garden sprinkler can with fluid volume gradients works well. Do not use metal containers.
3. Dampen concrete surface before applying acid solution. Avoid standing water when applying acid as this will produce non-uniform etching. Do not let concrete dry while etching.
4. Apply acid solution uniformly. A plastic garden sprinkling can may be used or a cheep plastic garden sprayer that can be thrown away after use. Scrub acid in with stiff bristle brush.
5. Let acid stand for 2-10 minutes.
6. Rinse surface thoroughly with hose or pressure washer.
7. While floor is still wet, check pH with pH strip and neutralize surface if necessary (pH strips can be purchased at pool supply store). pH should ideally be 7 although 6 – 8 is acceptable. If the pH is below 6.0, residual acid is still present in the concrete surface and must be neutralized. A neutralizing solution of baking soda can be used (.25 cups per gallon of water). Re-check the pH and repeat the neutralizing process if pH is still below 6.0. If pH is over 8.0. perform additional rinses until in acceptable range or add diluted acid to lower pH).
8. Dry surface thoroughly before coating. Weed torch can be used to accelerate drying (not recommended in confined spaces). Drying can be accelerated with fans.

Note: Before any Dura-System products are applied, the concrete surface must be clean, dry and have uniform porous surface prior to application (like 80 – 100 grit sand paper). More than one etch may be required to achieve proper porosity. Failure to achieve balanced pH, uniform porosity, and dryness may result in delamination of the coating system from the substrate.

Generic Preparation Notes:

New Poured Concrete: For surface preparation, refer to SSPCSP 13/NACE 6. Surfaces must be clean, dry, sound and offer sufficient profile to achieve adequate adhesion. Minimum substrate cure is 28 days at 75°F. Moisture content must be below 12% prior to coating. Remove all form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by abrasive blasting, mechanical scarification, or suitable chemical means such as muriatic acid etch, refer to ASTM D4260. Rinse thoroughly to achieve a final pH between 6.0 and 9.0. Allow to dry thoroughly prior to coating.

Previously Poured Concrete: Surface preparation is done in much the same manner as new concrete; however, if the concrete is contaminated with oils, grease, chemicals, etc., it must be removed by cleaning with a strong detergent. Refer to ASTM D4258. Form release agents, hardeners, etc. must be removed by abrasive blasting, shot blasting, mechanical scarification, or suitable chemical means. If surface deterioration presents an unacceptably rough surface, an application of Dura-Lastic is recommended to resurface damaged concrete. Fill all cracks, voids and bug holes with mixture of 2 parts DURA-LASTIC and 1 parts Dura-Lastic GEL. Dura-Lastic and Dura-Lastic/Dura-Gel mix require a primer coat of Dura-Flex SF.

Previously Painted Surfaces: If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.