

# RENAISSANCE

## CONCRETE CHEMICAL STAIN

### Application Instructions

**Outline** (Read all instructions before starting):

- **Clean and prepare the concrete**
- **Mask off area**
- **Dilute stain with water 1:1.**
- **Spray on first coat and brush in**
- **Let first coat penetrate for 4 hours**
- **Rinse with clean water, scrub to remove residue and rinse again until rinse water runs clear**
- **Apply second coat to ensure complete coverage in lighter areas**
- **Wait 2-4 hours**
- **Clean and neutralize concrete**
- **Allow to dry overnight or longer until completely dry**
- **Apply 2 coats of SRI 25% Clear Acrylic Sealer letting dry about 12 hours in between coats.**
- **Use a mop on floor wax a few times per year (depending on traffic) to preserve the sealer finish.**

*RENAISSANCE™ Concrete Chemical Stain* penetrates concrete in varying degrees of intensity depending on the composition of the concrete resulting in mottled shading of colors. While these are the very characteristics that render a natural appearance, a test section should be produced for approval prior to the general application of the chemical stain. Whenever possible, this test should be applied on the actual concrete slab to be stained. An adequate size sample should be produced so a good judgment of the final appearance can be made. It is important that the same worker, equipment, and techniques that produced the sample be used for the finished project. Due to differences in cement, aggregate, admixtures, and finishing techniques used when placing concrete, chemical stain may produce results that are completely unexpected. Owners should be made aware of this potential issue and should understand that there are no guarantees with coloration, unusual fading, or even darkening over time.

#### COVERAGE RATE

- One gallon(diluted or full strength) covers 200-250 square feet
- Recommended dilution is 1:1 with water, therefore if you buy one gallon, after dilution you will have 2 gallons.
- Two applications are recommended for most jobs

#### SURFACE PREPARATION

New concrete should be allowed a minimum of fourteen (14) days to cure. Cooler climates, (highs not reaching 50 F) require curing times of twenty-one (21) to twenty-eight (28) days. Liquid curing agents should not be used. Concrete must be thoroughly cleaned and rinsed before chemically staining. Water must easily penetrate the surface. Spotting the surface with water can check this. The water should darken the surface and be readily absorbed into the concrete. If water "beads" and does not penetrate, additional curing and/or surface preparation must be done.

NOTE: If adequate curing time has elapsed and water still does not penetrate, then a curing compound may be present and must be stripped. If this occurs, testing or other investigation may be required to determine what type of stripper to use.

The concrete surface should be pressure washed with a fan tip or cleaned with a rotary machine and swept. Clean all dirt and loose debris from surface using detergent(such as TSP: TriSodium Phosphate) when necessary. A commercial degreaser works well in removing some mild oil and grease stains. Oil, grease, and other petroleum stains that are permanent will not accept chemical stain. Chemical stain should not be used over petroleum stains.

NOTE: Since *RENAISSANCE™ Concrete Chemical Stain* reacts with cement paste, aged or broom-finished concrete may not produce the variegated appearance that new troweled concrete produces.

## PROTECTION

Surrounding areas and foliage should be protected prior to staining. The work area should be roped off. All adjacent vehicles should be removed and the roped areas closed to foot or vehicular traffic. Any adjoining walls should be masked. Wear approved acid vapor respirator NIOSH/MSHAA TC 23C. Provide adequate ventilation and sufficient local exhaust as needed to maintain exposure below TWA and TLV limits. Wear chemical-resistant gloves and chemical splash goggles. Wear suitable protective clothing, chemical resistant apron and boots to avoid skin contact.

## APPLICATION

**RENAISSANCE™ Concrete Chemical Stain** should be applied by using a pump-up sprayer with all plastic components.

**RENAISSANCE™ Concrete Chemical Stain** contains hydrochloric acid and will corrode metal components. Liberally apply one coat of chemical stain while agitating surface with an acid-resistant brush. For best results, maintain a wet edge. Brushes should be uncolored, acid-resistant nylon bristles with a medium stiffness and able to hold liquids. Airless sprayers are not recommended. Do not splash, drip or allow the chemical stain to puddle in joint areas or other depressions unless a changed color affect is desired in those areas. Do not walk on the wet surface. Footprints will appear darker than the adjacent areas. If stepped on by accident, the footprints should be brushed out immediately.

The liquid chemical stain color will not resemble the final color produced on concrete surface. The color changes as the chemical reactions take place. **RENAISSANCE™ Concrete Chemical Stain** has a slight bubbling or fizzing action when applied. Use a circular motion and keep the brush in constant contact with the surface in a continuous motion. To avoid lap marks, previously reacted chemical stain should not be spread to the new work areas. It should be brushed back over the section just treated.

**RENAISSANCE™ Concrete Chemical Stain** should be diluted for use. Dilute one(1) part stain to one(1) part water for normal usage. Color as well as shading may change depending on dilution. Other dilutions may be used, but dilution should be no more than one (1) part chemical stain to four (4) parts water. Test samples should always be produced to inspect results of diluted solution.

When applying chemical stain to vertical surfaces, application should start at the bottom and work upward. Excessive run down should be avoided.

Two applications are normally required on concrete. However, color is related to number coats as well as time before rinsing. Premature rinsing will generally lighten the color but may cause undesired, dramatic shading. Final coat of chemical Stain should be allowed to dry before rinsing unless different effects are desired. When multiple colors of chemical stain are to be layered, the first color residue should be cleaned off before the application of the second color and/or the third color, etc. This allows the color effect to the last color applied to be evaluated before another color is applied.

One coat usually produces the desired results when staining SRI Overlay System Products and other polymer cement. Polymer cement accepts chemical stain more readily than concrete. **RENAISSANCE™ Concrete Chemical Stain** may completely change the color of the polymer cement.

## CLEAN-UP & NEUTRALIZING

After staining, rinse until the rinse water is completely clean. A solution of 5-10% sodium bicarbonate (baking soda) and water should be applied to the surface to neutralize it. Use an acid resistant nylon bristled brush to scrub the surface and to remove all residue. If available, a rotary floor scrubber or buffer should be used to clean the surface. Rinse the surface again to remove all residue and neutralizing solution. An all plastic, acid resistant shop-vac can be used to collect all wash water. All residue, run off, cleaning water, and absorbent materials must be discarded and disposed of in accordance with all local, state, and federal regulations.

## SEALER

Two coats of SRI 25% Clear Acrylic Sealer (or other equivalent clear sealer) are required to complete the project. The surface must be clean, completely dry and at least 45° F during the sealer application. Open the pail of sealer and mix thoroughly with drill. To apply with roller, use a solvent resistant, 1/4" nap. Apply one thin coat forcing the sealer into the low areas of the texture. Allow sealer to dry (this could take up to 12 hours) then repeat the process (for second coat use non-skid modified sealer if desired). To apply with an airless sprayer, use a size 8/13 reversible tip and spray evenly onto the concrete surface.

**CURE TIME:** Allow twenty-four (24) hours before permitting foot traffic on sealed area. Allow seventy-two (72) hours before permitting vehicle traffic on sealed area.