

# DECORATIVE CONCRETE SUPPLY

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## GUIDELINES FOR ACID STAIN

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### Concrete Resurrection Acid Stain

- Will not chip, crack or peel
- Beautiful penetrating color
- Helps reduce surface glare
- Can be applied interior and exterior

The final colors of stains cannot be guaranteed by use of color charts. Charts should only be used as a reference point. Each concrete slab will produce different looks depending on age, type of cement, finish and contractor experience. Success will depend heavily on stated application and surface preparation. The choice of both color and color combinations, along with the type of sealer to be used should be outlined and decided before the job begins.

### Color selections

• <b>Western Saddle</b>
• <b>Brown Stone</b>
• <b>Black Walnut</b>
• <b>Rich Mahogany</b>
• <b>Golden Sand</b>
• <b>Mossy Oak</b>
• <b>Clay Canyon</b>
• <b>Mountain Road</b>

Color charts should only be used as a reference look.\*

\*\*Approximate coverage rates:

- Non-Diluted 100-200 sf/gal
- Diluted 1-1 200-300 sf/gal
- Diluted 2-1 300-400 sf/gal
- Diluted 3-1 400-500 sf/gal

## Section I -SURFACE PREPARATION

Careful consideration should be taken to ensure proper curing and cleaning of the slabs. The floors should be inspected by the contractor, owner and/or architect before work begins.

It is also recommended that concrete have a 28 day cure time before stain is applied and that a moisture migration test be performed. All cures, sealers, and glue from tile, carpet and linoleum must be **100% removed** in order for the stain to penetrate the concrete. **REFERENCE ASTM F1869 & ASTM F 2170**

### **NEVER USE MURIATIC ACID**

**Muriatic acid will affect the calcium hydroxide needed for the stains to work properly.**

For the acid stain to penetrate and react with the surface, it must come in contact with the surface. A water test is recommended to test the surface porosity. When floors are tightly finished and troweled, the use of mechanical methods creating an ICRI /CSP of 1 or 2 can open the floor up to accept the stains.

#### **REFERENCE ICRI Guideline 03732**

Acceptable methods of opening up the floor are:

- buffer with black pad
- buffer with sanding screen
- grinders with metal tooling
- resin pads with grits of 35 to 125

Creating the proper profile will allow for the sealer to properly adhere to the concrete, thereby avoiding “peeling” of sealers seen on many jobs.

## SECTION II -APPLICATION

Prior to application of stains, adjacent areas, walls, trim, painted projects, cabinets, woodwork etc. must be protected from:

1. Overspray
2. Run/Offs
3. Spills
4. Tracking “wet foot prints”
5. Walls and cabinets should be protected by a minimum of 36” of protective material (2-3 mill poly and use of painters tape on finished surfaces)

Application of stains should be done by experienced contractors with qualified references and job referrals. Use of stains may require dilution or application on a wet surface in order to achieve desired results. Stains will produce a natural mottled, variegated look on cured concrete.

Application on a test area should be done and approved before application and the test area should dry for a minimum of 4 hours in normal weather and 8 hours in cold or humid conditions. When the test is done, the dry residue should be vacuumed and mopped clean. When cleaned, it will give a preview of the finished look comparable to when sealing is completed.

Stains should be shaken before application. Application should be done with a plastic pump-up sprayer. Spray in a uniform pattern. Use an acid broom to hide any application swirl marks. Keep a wet edge when applying and always broom in a circular motion and avoid over working of stains. A 2<sup>nd</sup> coat will enhance the look after the 1<sup>st</sup> coat has dried. (**NEVER WALK IN WET STAINS!!!**) For best results, apply 2<sup>nd</sup> coat and do not broom in.

When applying stains, wear protective gloves and boots (disposable latex is fine), protective masks, and eye protection should also be worn. The most effective results will come from 2 “light” applications at different angles.



**Spraying from a different angle will allow for more complete coverage.**

### **SECTION III -CLEAN UP**

The staining of concrete will leave a residue that **MUST** be removed before final application of stain and before any sealer is applied. Failure to remove this residue will result in both stain and sealer failures. The residue is a bond breaker, which does not allow the sealer to properly adhere, thus allowing staining to look dull and be subject to faster wearing. The residue should always be disposed of according to local ordinances.

#### **When possible avoid excess water run-off**

Removal of stain residue does require water. All control joints or any cracks in the concrete should be checked for moisture before application of sealers. Run-off water can accumulate in these cracks or joints and affect the sealer. Many stain jobs will require specialty saw cuts. Cutting of concrete creates dust. Even with vacuum attachments, there can be an issue of dust along the edges of these cuts.

### **SECTION IV -SELECTION OF SEALERS**

Pre-determining the correct sealer is very important in the success of stained floors. Pick a sealer that will hold up for the intended use of the floor. Whenever time and work conditions allow, pre-seal a small area. This can show the final look of the stained project and you can use this area to see how the sealer holds up under expected conditions.

#### **Water based Sealers**

These are easy to use and apply. Application should always be done on dry concrete surface. Moisture issues will lead to failures in both stains and sealer. When applied, most water-based products have a “milky” look, but will dry to a clear, hard film. Most water-based sealers should then have a wax applied for both scratch resistance and gloss.

#### **Solvent Sealers**

These are a higher solid content and provide a hard wear surface. Can be applied by either spraying or rolling 2-3 light even coats. This will achieve the best finished look. Most will have a minimum solid content of **18%**. Avoid applying heavy coats so the material can both dry and become hard. Application of this type of sealer produces a strong odor which can linger for up to several days so caution should be used to avoid odor issues on interior jobs.

**Epoxies and Polyurethane Sealers:** These are excellent sealers for stained floors. Both are 2 part systems and will require mixing. These provide hard coating with a high gloss look, low odors and will withstand high traffic and chemicals. Most of these types of sealers have very short working times.