

The Concrete Studio

Acid Stained Concrete

Unique Concrete

March, 2010

About Stained Concrete Floors...

Stained concrete from The Concrete Studio provides unique and beautiful floors (and other surfaces) in virtually all structurally sound concrete, old or new. Below is a summary of the many features and benefits of stained concrete and an overview of the installation process.

Features

- ◆ Beautiful & unique colored concrete, providing multi-hued, translucent, marbled surfaces.
- ◆ Broad palette of both acid-stains and non-reacting stains in standard and custom colors.
- ◆ Acid-stains provide permanent, chemically etched-in color.
- ◆ Color intensity can range from light, semi-transparent to monochrome, full-saturation opaque.
- ◆ Acid-Stains work with and enhance the natural characteristics and variations in the concrete, often bringing out stone- and marble-like attributes of the surface.
- ◆ Strong, high-performance sealing & finishing systems provide long lasting durability, visual depth and gloss levels from matte to high-shine.
- ◆ Virtually unlimited color combinations using multiple separate-color, mixed color, and color-on-color options.
- ◆ Concrete scoring (below) provides even greater design and coloring options.

Applications

- ◆ New construction.
- ◆ Existing concrete, any age.
- ◆ Residential.
- ◆ Commercial & industrial – retail, office, restaurant, showroom, warehouse, etc.
- ◆ Interior, appropriate for all rooms.
- ◆ Exterior – porch, patio, driveway, pool surround, etc.
- ◆ Above-grade and multi-level surfaces, lightweight concrete, engineered-concrete overlays.
- ◆ Walls, architectural, structural, cast concrete.

Benefits

- ◆ Turns a concrete slab into a beautiful sealed and finished floor with a virtually indestructible substrate.
- ◆ Ideal choice for both new & existing concrete of any age. Older concrete slabs with previous coverings / treatments are usually fine candidates for staining.
- ◆ Permanent color.
- ◆ Warm, natural, organic feel and look with all the advantages of hard surface flooring.
- ◆ Works with all design, decorating and furnishing motifs.
- ◆ Durable, long lasting, no-strip sealing and finishing systems.
- ◆ Low maintenance.
- ◆ Cured surfaces are inert and non-allergenic.
- ◆ Typically a sizeable cost benefit relative to other treatments/coverings, especially with new construction.

Description

A concrete surface that has been stained, sealed and finished with one of The Concrete Studio product systems will provide a stunningly beautiful floor that is durable, low maintenance and slip resistant. This is a brief introduction to stained and finished concrete, focusing mainly on the acid-staining process for flooring.

◆ **What is acid-staining?** Acid-stains permanently color-etch the concrete slab giving a fluid, translucent, multi-hued “marbled” look with different tones and intensities of color across the surface. Acid-stained concrete does not resemble the opaque coloring of painted concrete, nor the monochrome look of concrete stained with a conventional non-reacting stain.

The unique and beautiful look is achieved by a combination of acid and colorants in the stain reacting with lime and minerals within the concrete to chemically bond the color to the surface of the concrete. Additionally, the type, origin, composition and finish of the concrete itself are important variables in the process. Thus each acid-stained concrete surface will be unique with regard to color, intensity, patterning, etc.

The typical conventionally finished, cured concrete surface, old or new, is an excellent candidate for acid-staining. This includes slabs that may not be uniformly smooth-finished, and slabs that currently have other floor treatments such as carpet, vinyl, hard tile, etc.

◆ **What is the acid-staining process?** On old or new concrete the process of staining and finishing a floor can be divided into four steps:

I. Demolition/Cleaning – Clean concrete is an essential prerequisite to a successfully stained floor. All concrete, new or old, “clean” or dirty, must be cleaned prior to staining. The first phase requires removal of current floor treatments if any, and deep cleaning the concrete to achieve a surface free of contamination that will be detrimental, structurally or cosmetically, to the finished stained floor. Such contamination includes paint, glue, lacquer, stains, chalk lines, dirt, drywall mud, marker lines, insulation and anything else on or in the concrete that shouldn’t be there.

The Concrete Studio uses a versatile and safe water-based strippers and cleaners for most concrete. Cleaning concrete is typically the most labor intensive, difficult, and longest phase of the installation.

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II. Staining – The acid-stain is applied to the clean, dry concrete and allowed to thoroughly dry. This may take a number of hours and may be scheduled to allow an overnight drying interval. The stained floor is then re-cleaned in preparation for sealing and finishing.

III. Sealing/Finishing – The stained concrete does not become a floor until it has been sealed and finished. Sealing the concrete does two things: performs the essential job of protecting the stained surface, and provides visual depth and unity, and a rich finished look at any gloss level.

The Concrete Studio uses industrial-grade sealers specifically formulated for concrete, and finishing products designed to provide a naturalistic appearance and additional hardness. Wax may be applied as a finishing treatment although we do not recommend it and will do so only upon request. Concrete sealers have cost, performance, maintenance and safety advantages relative to wax and the appearance and visual appeal of sealed and finished concrete is equal or superior to wax.

IV. Curing – It is critical that the stained and finished floor be allowed a full uninterrupted cure period of 3 days from last application of finish. During this time no activity is to take place on the floor; foot traffic should be kept to a minimum, no shoes, and of course no furniture or construction activity. Failure to allow the floor to properly cure may result in a permanently damaged surface.

◆ **How long does the acid-staining process take?**

Job duration is usually a multi-day process generally calculated as one to three days *after* cleaning and *before* cure period. The cleaning time varies depending upon square footage and degree of difficulty. New surfaces properly protected clean quickly, 2,000 – 3,000+ sq. ft. /day (under 20 man-hours, e.g.) and other things equal is reflected in a lower price. Existing surfaces with heavy non-water soluble contamination proceed more slowly. A typical previously carpeted residential slab, 1,000 sq. ft., may proceed at ~300 to 500 sq. ft. of heavily contaminated concrete.

The clean concrete is then stained and rinsed. Once thoroughly dry the concrete is sealed and finished, distinct processes which may take one day each, in order to provide a drying interval for the sealer. Light foot traffic (no shoes) is allowable 2 – 4 hours after finishing is complete.

◆ **What rooms or areas of a structure are appropriate for acid-staining?**

The Concrete Studio frequently works with owners and builders during new construction to stain the entire slab: a finished residence may have stained concrete flooring in all

rooms, from living areas to closets and utility. Stained concrete is practical for commercial applications such as offices, retail, restaurants, warehouses and other industrial, etc.

The application of stained concrete flooring is not usually limited by the intended use or function of a particular space since the sealing and finishing materials of the floor can be matched to the usage requirements. Generally, all areas of residential and commercial structures, regardless of size or function are excellent candidates for acid-staining.

Acid-staining will work successfully in one room (e.g., a single living area or reception area or office), a section of the structure (e.g., open-plan living/kitchen/dining areas, public areas in office buildings), or an entire house, office, showroom, etc. Acid-stained surfaces are excellent aesthetic connectors to other types of flooring, such as wood, tile, carpet, etc. Acid-staining and scoring is a good choice for exterior applications as well, such as porches, patios, walkways, driveways, and pool surrounds.

◆ **What is concrete scoring?** Sawcutting lines in the concrete surface is called “scoring” the concrete and is done for decorative effect and to add to the visual appeal of the finished surface. Scoring is usually done as a repeating pattern, such as squares or diamonds, across the entire surface in order to provide a large tiled effect.

While a standard un-scored stained concrete floor is a thing of beauty, scoring greatly enhances the overall look of the finished floor and is generally well worth the additional cost. With new structures the concrete may be scored borderless on the open slab (the scorelines will run under the walls, fixtures, etc.) or with a border scoreline after walls are in place. “Border” refers to a scoreline that is cut some distance (usually ~ 6” to 12”) from, and parallel to, the walls and fixtures, as a design element itself, or to enclose a pattern that has been cut after framing (as lines cannot be cut flush to existing walls/fixtures). Bordered and borderless scoring can be combined on a single slab, across continuously stained or individual separately stained areas. Scoring can of course be done over the entirety of a large stain area, but is also often done on only one or a few areas/rooms within a larger overall stain project.

While the most popular scorelines are 24” to 36” repeating patterns, almost any design, from repeating geometric to stand-alone freestyle or faux-stone, to custom patterns and logos, can be cut into concrete. Scoring also provides more opportunities for the use of color such as dual-color border/area combinations, two-tone tiled effects, and many more.

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The standard sawcut line widths are either 1/8" or 1/4" wide and approximately 1/8" deep. The shallow depth of the cut provides the striking visual effect without being deep enough to trap dirt and debris. The cutting has no structural effect and does not harm the slab or the finished floor in any way. Scoring is usually priced in addition to the turnkey price quoted to stain the concrete and varies depending on the size of the pattern/amount of cutting, degree of difficulty (for custom designs, logos, etc.) and square footage. There may be a minimum charge/area requirement for concrete scoring.

◆ **What is the cost for acid-staining?** The Concrete Studio generally performs acid-staining installations on a turnkey basis, meaning we handle all phases of the job from the demolition to the finished floor for one fixed price per square foot of concrete, quoted in writing in advance. There may be additional labor charges for certain hard surface demolition (tile, wood, etc.), haul-off of existing floor coverings, and patching, if applicable.

All jobs include cleaning the concrete, even if it already looks clean or has been cleaned by others. "Clean" concrete, defined as concrete free of non-water soluble contamination and substantially free of other surface accretions and contamination qualifies for a price of \$2.00 to \$3.00 per square foot. All new concrete properly protected should qualify for this baseline price range, as well as concrete of any age in similar condition.

Since the post-cleaning job processes (the staining, sealing, and finishing) should not be materially affected by the prior condition or age of the concrete, the price for these components is usually the same for any surface. Therefore the pricing above the baseline is the result only of increased labor and materials for front-end demolition, cleaning and preparation. Pricing for heavily contaminated existing concrete (i.e., most residential existing concrete) may be priced considerably higher depending on surface condition. Proper precautions (especially covering the concrete) should always be taken with new concrete to ensure the lowest price.

The Concrete Studio is always happy to meet with prospective clients at their convenience to better determine pricing as well as to provide an on-site consultation and answer any questions. Please note that because job duration for acid-staining is usually as long for small jobs as for larger ones (due to scheduling requirements and drying intervals, among other things) The Concrete Studio has a minimum job requirement of 400 square feet equivalent.

◆ **What should I look for in choosing a firm to stain my floor?** As one of the oldest decorative concrete companies in the Metroplex, The Concrete Studio has been providing beautiful, durable stained & scored concrete floors since 1995. We provide consistent superior performance and reliability in every job we do. We welcome your call or email to discuss any aspect of the process or answer any questions you may have. And we are more than happy to provide quotations and site visits for specific projects.

Of course there is always the unfortunate possibility that someone other than The Concrete Studio will perform your decorative concrete job, so listed below are a few items and qualifications that we feel are important for any individual or firm installing decorative concrete to possess, and will hopefully be of some help in choosing a vendor.

◆ Concrete staining, decorative scoring, and sealing & finishing of concrete floors is a specialized activity. Vendors should preferably be full time applicators with a successful and reasonably long history in the business. No two stain jobs are alike - experience counts.

◆ Vendors should understand the needs of builders, contractors and property owners, and work closely with them to ensure proper scheduling and end-user satisfaction.

◆ Vendors should be able to perform all aspects of stained concrete floor work turnkey, from surface cleaning and preparation to finished floor. There should be no hidden costs. If feasible to perform them, on-site color samples should be done at no extra charge. Vendors should provide assistance in surface protection during construction if applicable and desired.

◆ Vendors should have experience with a wide variety of stain and sealer brands and colors. This experience ensures the use of appropriate materials for the job at hand, as well as the ability to translate a client's desires and ideas into concrete reality.

◆ Vendors should have the ability to educate and advise their clients (and their clients) on all aspects of the process from design and color ideas to the specifics of the process itself to the care and maintenance of finished floors.

◆ Vendors should ideally be experienced with unusual and exotic multiple-color floors and other custom staining options, as well as custom decorative scoring that can go well beyond standard patterned sawcutting.

◆ Vendors should provide ongoing supervision at all phases of every job. Owner supervision (if possible) is even better.

◆ Vendors should be reliable and understand the scheduling pressures of owners & builders, and respect those requirements by working on schedule and performing all work in a timely manner. There is usually no intrinsic reason to interrupt a multi-day stain job once begun.

◆ Decorative concrete vendors should have the goal of providing a high performance floor with a high-end appearance that costs less than the alternatives. Concrete staining is not only as beautiful and durable as hardwood, ceramic, marble, brick, or stone flooring but can be installed turnkey for a much lower cost.