

ACID STAINING

A New Dimension in Architectural Concrete

Patina Chemical Acid Stain is a new product for creating unique one-of-a-kind concrete colouring, where no two jobs will be alike. Patina Chemical Acid Stains produce distinctive floors with low and simple maintenance requirements. Patina Chemical Acid Stain is an acid based material with metallic salts that chemically react with the minerals in the concrete. This reaction creates a permanent color that will not fade, chip or peel, and will last the life time of the surface it's applied to.



Patina Chemical Acid Stain is available in a variety of colours. The colours can be mixed and matched to create an endless combination of effects. Patterns can also be incorporated into to surface to produce outstanding effects. Patina Chemical Acid Stained concrete is virtually maintenance free. Just sweep as needed; spills can be cleaned up with a commercial detergent. Interior floors can be maintained using a good quality floor finish.

Existing concrete surfaces can be overlaid with Spec-Deck or Polytop. When used with a variety of finishing techniques; the use of pattern stamps, stencils, saw cutting or engraving; striking effects can be achieved. Using a combination of an overlay and acid stains old concrete can become a new work of art; at a fraction of the cost of replacement.





Concrete Overlay

Samples of some other finishes possible with our concrete overlay finishes



Polytop overlay stamped and then acid stained



Spec-Deck overlay rough trowel finish

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PATINA STAIN

Patina Stain is a ready to use penetrating liquid acidic stain. It reacts with cured cementitious surfaces to produce weather resistant mottled, variegated and/or translucent colour effects.

Description and Uses: It has been formulated to colour natural concrete or to modify the colour of previously coloured concrete. Patina Acid Stain reacts with the surface of cured concrete which produces unusual and permanent colour effects.

Patina Stain creates uneven, mottled, variegated and/or translucent colour effects. The subsequent results are similar to the natural shadings of stone or the aged distinctive and lasting stained surfaces. This Patina Stain effect is excellent for exterior and interior floors, walls and artificial rock. The colour and pattern is unique to each stained concrete surface and cannot be duplicated with other colouring materials.

Patina acid etched cementitious surfaces give the aged appearance of structures of early civilizations. These stained surfaces are striking in appearance and add to the artistic features of modern sculpture, walk-ways, concrete walls and drainage canals. Malls, plazas, patios, lobbies and many other concrete structures are given warmth and natural like beauty when coated with Patina Stain. The Patina Stain treated surfaces have subtly shaded colour with natural beauty. Patina Stain treated floors can be coated with a high gloss or low gloss floor finish wax, to provide a slip resistant finish and give an easy to maintain surface. Patina Stain cementitious surfaces have excellent durability and abrasion resistance. The stain colours become a part of the surface. The effect will only wear as the cementitious surface wears.

On new concrete installations, a different range of colour effects can be obtained by colouring the concrete with one of our oxide colours before the application of the Patina Stain.

The application of an epoxy, acrylic solvent sealer (exterior only) or urethane over a Patina Stain surface highlights the mottled variegated or streaked surface producing a clear, high gloss finish. The clear coatings help protect the stained surface during everyday use. Two coats of clear are recommended for initial application. The application of a water based coating/sealer will not provide the deep colour highlights that a solvent or epoxy based product will.

Composition and Materials: Patina stain is composed of water, hydrochloric acid and water soluble metallic salts. Patina stain penetrates the substrate and reacts with the chemicals in the cured concrete. This reaction produces insoluble colour deposits in the pores. As the colours of Patina stain vary, so does the complex

chemical composition of the stain. Patina stains contain no resins or pigments. The reaction etches the concrete slightly, removes laitance and promotes a more effective chemical reaction and deeper colour penetration.

Limitations: Patina will not hide surface discolouration, blemishes cracks or other construction errors. Patina Stains produce unique effects to each individual concrete substrate and may differ significantly from the colours shown on a colour chart. Patina Stains will produce a wide range of finished colours depending on many factors including, but not limited to, finishing techniques, mix designs, curing practices, age and condition of concrete in existing slabs, base colour and surface porosity, number of Patina Acid coats, experience of the applicator and the application of a clear sealer. There is an element of uncertainty and unpredictability inherent in the use and final appearance of Patina Stains, including uneven, mottled or translucent effects. *In particular, blue and green based stains react to the presence of moisture and may create a black, spotty effect.* It is strongly recommended to sample the actual surface that is to be stained (in an inconspicuous area).

In order to verify the approved final appearance, a sample test should be made on the same surface to be stained. Mottling and wide colour variations will occur. The exact colour shade and the depth of penetration is not predictable. Some concrete surfaces cannot be stained successfully. When dirt, grease or other contaminants are left on the surface or in the pores, the Patina stain reaction may be blocked. Weathered concrete that has been exposed to water run off or dripping over long periods of time may lack the necessary chemical make-up for the proper chemical stain reaction. Different batches of concrete can vary on the same job site. These, as well as patched areas, can vary significantly as to colour from adjacent areas. The wear resistance of Patinas stain coloured concrete is totally dependent on the strength and abrasion resistance of the concrete surface over which it is applied. High traffic areas will need regular maintenance and applications of a clear sealer such as high gloss floor wax.

Colour Effects: Patinas stain is manufactured in a number of colours. The colour produced from each application is unique to each concrete surface and may differ significantly from the colour charts. Wide colour variations and patterns are normal. This is the uniqueness of Patina stain. The variations will be emphasized when a clear coat is applied. To produce a deeper colour effect, two applications must be made. A sequence of colours may also be applied using a different colour for each application. Due to the chemical reactions the final colour may take up to 90 days to stabilize.

Seller warrants that the product described on the face hereof has been manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer shall be responsible for any claims resulting from the failure to utilize the product in the manner in which it was intended and in accordance with instructions provided for use of product. The only obligation of either the seller or manufacturer shall be to replace any quantity of this product which proved to be defective. Neither seller nor manufacture assumes any liability, loss, or damage resulting from use of this product.

Slip Resistance: To maintain slip resistance of Patina floors, stain only slip resistance concrete surfaces such as floated, swirl, sandblasted or most imprinted concrete. For interior flat floors, a uniformly lightly troweled surface is desired. A test area should be treated with Patina stain and checked for adequate wet and dry slip resistance.

Coverage: A minimum of two separate Patina Stain applications are normally required. Only one coat may be required over a colour hardener. The Patina Stain should be applied full strength. The coverage will vary greatly based on the condition of the substrate. The coverage should be approximately two hundred square feet per gallon for each application.

Shelf Life: Keep away from direct sunlight. Under normal conditions the shelf life should be at least, one year. Keep containers tightly closed and upright.

Test Sections: Patina Stain is a unique chemical concrete stain. Experimentation, skill and practice are needed to discover the multitude of patterns and colours possible. The following will determine the end result: Chemical composition of concrete, mix design, porosity, age, texture and colour of concrete. The Patina colour preparation methods, application procedure, number of coats, experience in the use of the material and the finish coating materials and methods used will also determine the end result. To verify the approved appearance, a test section should be produced prior to the general application of the chemical stain. This test should be done on the job site on the specific surface to be stained. The test area should be of adequate size for a good visual inspection. The same worker, equipment and techniques should be used on the test area and the finished job site.

Equipment: On large areas the Patinas can be hand-pump sprayed with an acid resistant sprayer, to apply the stain to the surface. For special effects, sponges, lambs wool applicators or acid resistant spray bottles can be used. All surface preparation and application procedures should be tested before use on the job site. For borders and small areas to be highlighted, use a scrub brush to apply the Patina Stain.

Surface Preparation: As previously mentioned a test section should be completed and approved. Slip resistance should be checked for large flat traffic areas. Surrounding areas and foliage should be protected prior to staining. The work areas should be roped off. All adjacent vehicles removed and the roped areas closed to foot or vehicular traffic. Sprinklers and fountains should be adjusted to avoid wetting the stained surface. When rain is expected within 3 to 4 hours do not stain. Rain will wash the chemical stain from the surface prematurely. The runoff may affect adjacent areas or harm adjacent foliage. On hot and/or windy days the Patinas stain will dry faster. This may require more material or a second application. Before applying the Patina stain the concrete surface must be cleaned to remove all dirt, grease, oil and plaster stains. Previous coatings, water repellents and adhesives must be removed, using a scraper or commercial paint stripper. **Acid wash should not be used prior to applying the Patina Acid Stain.**

New concrete should be allowed a minimum of 14 days to cure, preferably 30 to 60 days depending on weather conditions. Liquid curing agents should not be used. For best results use new and unwrinkled non-staining high quality curing paper. Do not overlap the paper. This could cause colour changes in the Patina stain surface. For uniformity of colour, the new concrete should be the same age using the same curing method. Immediately before chemically staining, the concrete must be thoroughly cleaned. The concrete should be pressure washed or rotary machine cleaned and swept. Then rinse the surfaces thoroughly.

Existing, aged concrete should be cleaned similar to the new concrete. The cleaned surface must be penetrable. This can be checked by spotting the surface with water. The water should darken the surface and be readily absorbed into the concrete. If the water “beads” and does not penetrate, additional surface preparation and testing must be done. On dense hard troweled concrete light sand blasting, shotblasting, or a diamond grind should be done.

The cleaning method used depends on the condition of the concrete. Various detergents and commercial cleaners should be considered and tested. Pressure washing or rotary floor machining is normally required. After cleaning, rinse until the rinse water is completely clean. Wet vacuuming may be helpful to remove water from interior floors. All contaminants must be removed from the concrete before staining.

Application: All surfaces must be clean and dry. Adjacent landscaping and surfaces should be masked and/or protected from spills, over spray and runoff. The entire work area should be roped off. All nearby vehicles removed. Any adjoining wall should be masked. The work areas should be divided into small work sections using natural dividing lines, such as walls, joint lines or other stationary features. It is important to control section to section wet edges and overlaps. Do not step on the wet Patina areas. All safety precautions must be followed including wearing full protective gear.

Patina Stain should be applied full strength. When using more than one container of Patina Stain on a project combine the number of containers to be used into a larger container before use. Do not “puddle”, apply a uniform film thickness. The Patina will not resemble the final colour produced on the concrete surface. The colour changes as the chemical reactions take place. Patina has a slight bubbling or fizzing action when applied to the concrete. If this does not happen, the surface was not properly prepared. Additional surface preparation will be required. The Patina Stain should be transferred to the surface by spray. A wet edge must be maintained.

During the application of Patina Stain, the surface should be uniformly saturated with the liquid stain. Do not splash, drip or allow the Patina Stain to puddle in joint areas or other depressions unless a changed colour affect is desired in those areas. Do not step on the wet surface. Foot prints will appear darker than the adjacent areas. If stepped on by accident, the footprints should be brushed out immediately.

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

The Patina Stain reaction time is dependent on wind, temperature and humidity. The Patina Stain wet and/or dry should remain on the surface for a minimum of four hours. Prevent contact with the surface until the stain residue has been removed and the surface rinsed.

For one colour or mixed colour applications, the Patina Stain surface should not be touched until the final application has been applied. When different colours of Patina Stains are to be applied on top of each other, the first colour residue should be cleaned off before the application of the second colour and/or the third colour, etc. This allows the colour effect of the last colour applied to be evaluated before another colour is applied.

After the final application of Patina Stain has remained on the surface for at least four hours. **All residue must be removed**, by wet scrubbing with a detergent using a janitorial auto scrubber with blue pads, two passes should be done to ensure all residue is thoroughly removed. Hand scrubbing the surface and mopping up the residue may not properly clean the surface. The surface must be rinsed clean. Be sure the runoff does not stain adjacent areas or harmed plants. All residue, run off, cleaning water, and absorbent materials must be discarded and disposed of in accordance with all local and federal regulations.

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Sealing Patina Stain Surfaces: After the completion of the last application of Patina Stain, the surface should be allowed to dry at least twenty four hours. This is totally dependent upon weather conditions. The surface should be dry prior to the application of the clear sealer. For interior surfaces a clear epoxy coating is recommended, the first coat should be applied at 300 square feet per gallon and the second coat at 160 square feet per gallon. Where solvent vapours will not be a problem two coats of a low viscosity Acrylic Solvent Base sealer followed by one to two coats of a high gloss Acrylic Sealer may be used. Urethane, epoxy or water based sealer may also be used. Use an airless sprayer, brush or roller.

All floor surfaces should be inspected to verify the wet and dry slip resistance prior to removing the barricades. Allow at least 24 hours for foot traffic and 72 hours for vehicle traffic .

Maintenance: Patina stained and sealed concrete should be swept off as needed. Spills should be cleaned up when they occur. Hose off loose dirt. Soiled areas should be scrubbed or mopped using a commercial detergent. Interior floors that require polishing should be maintained by using a high gloss or low gloss floor finish wax. Follow manufacturers instructions.

Caution: Danger. Corrosive liquid. Can cause eye and skin burns. Can cause severe eye irritation possible blindness. The vapour or mist can cause irritation of nose, throat and lungs. Do not get in eyes, on skin or clothing. Wear acid vapour mask, goggles, gloves, protective clothing, chemical resistant apron and boots. Use with adequate ventilation. Do not breathe vapour or mist. Close containers after use. Store in tightly closed containers in upright position. Important: Consult Safety Data Sheet for further information.

Warranty: Patina Stain is warranted to be of uniform quality within manufacturing tolerances. Since the manufacturer has no control over its use, no warranty, expressed or implied is made as to the effect of consumer use. The sellers and manufacturers obligation under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective.



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