

IDEAL STAINS

Reactive stains for concrete surfaces.

DESCRIPTION

IDEAL STAINS are water and acid based solutions of metallic salts, formulated to "colour etch" new or existing concrete surfaces. These penetrating solutions react with the lime in the concrete and cement to form permanent, insoluble precipitants of varying colours.

IDEAL STAIN creates uneven, variegated or translucent colour effects, much like the shadings found in natural stone, marble or slate. The distinctive obtained look is ideal for exteriors, interior floors, walls, and artificial rock and water features. The result is unique to each concrete surface and cannot be duplicated with other colouring materials.

IDEAL STAINS are intended for use on horizontal concrete and other masonry mediums. Although they are suitable for vertical surfaces, care must be taken in its application and a pre-planned work method and finish must be obtained and approved by the client.

The colour of chemically stained concrete is superior in durability and abrasion resistance to that of other concrete surfaces coated with acrylic stains or other types of paint, which can wear off or weather quickly and may also, delaminate. Due to their chemical reaction with concrete, IDEAL STAINS become part of the surface. They will not fade, chip, crack, or peel but wear only as the concrete surface itself wears.

IDEAL STAINS produce a mottling of colour tones that are directly affected by the substrate colour, age and state of the concrete and its porosity. Variations and inconsistencies in colour are expected and indeed are usually the reason for using this colouring technique.

WARNING

IDEAL STAIN colours of Turquoise, Fern Green, and Jade must only be used for interior applications, as they may react with water and darken or blacken when exposed to excess moisture. When these colours are used, the substrate must be well drained and not subject to hydrostatic pressure, and the chemically stained concrete must be protected from any source of water.

LIMITATIONS

IDEAL STAIN 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. There is an element of uncertainty and unpredictability in the use and final appearance of chemical stains.

It is, therefore, strongly recommended that samples are created, viewed and approved using the same construction techniques and materials that will be used in the actual construction of the project. This sampling process must be completed prior to specifying the final colour and appearance.

The wear resistance and durability of IDEAL STAIN is dependent on the strength and abrasion resistance of the surface to which it is applied. Chemically stained surfaces, subject to pedestrian and vehicular traffic, will require periodic maintenance and a re-application of Sealer.

Interior floors should be maintained by using IDEAL-CERA or IDEAL WAX, high-resistant floor polish.

IDEAL STAIN cannot be used to hide surface blemishes or to cover construction errors. The variegated colours produced are unique to each concrete surface and depend on the chemical composition, mix design, porosity, age, texture and colour of the concrete substrate.

The surface appearance will also be influenced by the IDEAL STAIN colour, preparation methods and application procedures, the number of IDEAL STAIN applications, experience in use of the material, sealing or finish-coating materials and methods and other factors. Each will significantly affect the final appearance and performance of the chemically stained concrete. To verify and approve suitability and appearance, test sections must be produced on each individual concrete surface, for each colour effect, prior to the general application of the chemical stain.

Mottling and wide variations in colour and intensity will generally occur. If contaminants remain on the surface, the penetration of the chemical stain may be inhibited. Older or weathered concrete, or areas that are frequently exposed to run-off or dripping water, may lack the necessary ingredients to react with IDEAL STAIN. Concrete from different loads or pours and patched areas will appear different in colour, when chemically stained from that in adjacent areas. Most self-levelling toppings are not suitable for IDEAL STAIN applications.

IDEAL STAIN is a waterborne solution and it must not be allowed to freeze at any time. IDEAL STAIN applications must take place on a calm day, when ambient and substrate surface temperatures are between 4 and 32°C. If the ambient temperature is expected to drop below 4° C during application, IDEAL STAIN must not be applied.

For safety considerations, a representative test section should be produced prior to general application and the entire surface inspected to verify and approve the adequacy of wet and dry slip resistance. The acidic nature of the IDEAL STAIN reaction can, in many cases, help provide a slip resistant surface.

COMPOSITION

IDEAL STAIN is an acidic, water based solution of metallic salts that penetrate and react with chemicals in cured and dry concrete and some cementitious, self-levelling toppings. This product produces insoluble colour deposits in the pores and each colour is produced from a different, complex proprietary formulation, which does not contain pigments or resins. They lightly etch the concrete surface to remove laitance and allow a more effective chemical reaction and a deeper colour penetration.

PREPARATION

Surrounding areas, landscaping, and adjacent surfaces should be protected. Prior to making IDEAL STAIN applications, precautions should be taken to prevent water penetration into the concrete from any source. Any localised sprinklers and/or fountains should be adjusted to avoid wetting the surface prior to application of the stain.

Before chemically staining the surface of the concrete all dirt, mould oil, plaster stains, oil, and grease must be completely removed by cleaning. Acid washing should not normally be used as a cleaning procedure as it may remove necessary reactants from the surface. Failure to remove all contaminants and coatings that impede the penetration of IDEAL STAIN into the concrete will cause appearance defects. It should be noted that older or weathered concrete surfaces or areas that are frequently exposed to run-off or dripping water may have lost some of the chemicals needed to produce a reaction with the chemical stain and the reaction may be muted.

When planning new concrete installations, an additional range of colour effects

is possible when the concrete is coloured before the surface is chemically stained. IDEAL WORK COLOUR HARDENER or for heavier traffic areas IDEAL FLOOR HARDENER, is preferentially recommended, as hard, dense surfaces, particularly rich in colour, are produced when IDEAL STAIN is applied to colour-hardened concrete.

Immediately prior to chemically staining, the concrete must be thoroughly cleaned. The surface should be swept and then pressure washed or scrubbed using a rotary floor machine with red pads. Use of a suitable, high-quality commercial detergent will help the cleaning process. The surface must be rinsed after cleaning until the rinse water is completely clear.

Existing, older concrete must be cleaned so that the surface is completely penetrable before receiving the initial application of IDEAL STAIN. An indication of whether the concrete is penetrable can be obtained by putting small amounts of water on to the surface. The water should immediately darken the substrate and be readily absorbed. If the water 'beads' and does not penetrate or only penetrates in some areas, additional surface preparation and re-testing must be performed.

To remove dirt and other contaminants, detergents and other commercial cleaners should be considered and tested. Pressure washing or scrubbing with a rotary floor machine is normally required. After cleaning, the surface must be rinsed to remove any remaining residue. Rinsing should continue until the rinse water is completely clear. Wet vacuums may be helpful to remove dirty water, particularly on smaller projects like interior floors. After drying, the surface must be carefully inspected and tested again for its penetration properties. If necessary, additional general or spot cleaning and rinsing should be performed.

APPLICATION

All surfaces must be dry and properly prepared. Surrounding areas, landscaping, and adjacent surfaces must be masked or protected from spills, flicking, over-spray, tracking, equipment contact, and run-off. The work area should be sectioned off, nearby vehicles removed and appropriate sections closed to potential traffic. Adjoining walls of porous material such as plaster or masonry should be covered.

IDEAL STAIN should be applied full strength (undiluted) using a hand-pump sprayer. This sprayer must be of professional quality and should, for best results, be equipped with a fan tip. All parts that will be in contact with the chemical stain should be made from acid-resistant plastic. The use of an airless sprayer is not recommended.

The colour of the IDEAL STAIN liquid solution will probably have no resemblance to the final colour produced on the concrete surface. The solution will appear transparent when first applied but will assume a cloudy, frothy or muddy appearance as the chemical reaction occurs.

IDEAL STAIN normally fizzes whilst reacting. If fizzing does not occur then the surface has not been adequately prepared or the concrete is not sufficiently reactive to be chemically stained. IDEAL STAIN should be transferred to the surface by spray and immediately scrubbed in as soon as it touches the concrete, using a circular or figure eight motion. Work in small sections using a brush, keeping it in constant contact with the surface in a continuous motion. A wet edge must be maintained at all times to avoid 'tracking' or streaks. IDEAL STAIN should be applied to vertical surfaces in the same manner. Application should start at the bottom and proceed upward. Excessive rundown must be avoided. Reaction time depends on wind conditions, ambient temperature, and humidity. Whether IDEAL STAIN remains wet or dries on the surface, it should be allowed to remain in contact with the concrete until the desired effect is

obtained, which is usually a minimum of 4 hours.

For one-colour or mixed-colour applications, the chemically reacted residue need not be removed from the surface before the next IDEAL STAIN application is made. When different colours are used in consecutive applications, the surface is normally washed between applications so that the colour effect can be evaluated before another colour is applied.

After the final application of IDEAL STAIN has remained on the surface for a minimum of 4 hours, all solution residues must be neutralised and then removed completely prior to sealing. A solution of Neutralize Powder (by Ideal Work) and water, (500 gm. neutralizer per 20 Litre. of water) can be used to neutralise the residual stain. The solution should be applied until it stops fizzing. After neutralisation, the surface should be rinsed thoroughly with clean water several times to remove soluble salts. Run-off may stain adjacent areas or harm plants and it therefore should be collected by wet-vacuuming or absorbing with an inert material. After rinsing is complete, a pH test should be performed to verify that no residual acid is present. If the pH is 7 or higher, no residual acid is present. If residual acid is present, further neutralisation is required. After completion of neutralisation, rinsing, and further verification that no acid is present, the stained surface should be tested for cleanliness by wiping the surface with a white cloth. If residue appears on the cloth, additional surface cleaning must be performed. Failure to completely remove all residue, prior to sealing the surface, will cause appearance defects, adhesion loss or peeling, reduced durability, possible bonding failure and delamination of the sealer.

All chemically stained surfaces must be protected from all traffic until they are sealed.

COVERAGE RATES

The coverage rate is approximately 0.25 l/m².

A minimum of two separate IDEAL STAIN applications are normally required. Additional applications may be needed on older or weathered concrete surfaces, or to obtain a particular specific colour effect.

IDEAL STAIN should be applied full-strength (undiluted). Coverage will vary widely depending on the porosity and texture of the surface, composition and age of the concrete, preparation and application techniques, number of applications, and other factors. Sample areas must always be prepared and the results accepted by the client.

WEATHER CONDITIONS

Though the effect achieved is primarily dependent on the surface of the concrete to which it is applied and not on ambient temperatures, weather conditions should also be considered when planning IDEAL STAIN applications. The chemical stain will dry faster and may require more material, or additional applications to produce the desired results in hot, dry, and windy weather. Rain will wash the chemical stain from the surface prematurely and without proper protective works, run-off may stain adjacent areas or damage landscaping.

EQUIPMENT FOR PREPARATION AND APPLICATION

IDEAL STAIN is normally brush applied and scrubbed into the concrete surface. In larger areas, a hand-pump sprayer may be used to transfer the IDEAL STAIN solution to the surface, whilst scrubbing. Other types of equipment, such as sponges, sponge floats, lambs-wool applicators, or acid-resistant spray bottles may be used to create special effects. All preparation and application procedures should be tested before use.

FLOOR PROTECTION

Suggested sealers:

Exterior floors

IDEAL SEALER MEDIUM

IDEAL HARD Densifier (for high traffic)

Internal floors

IDEAL SEALER MEDIUM

IDEAL PU 78 Polyurethane sealer (high chemical resistance)

IDEAL HARD Densifier (for high traffic)

COLOURS

IDEAL STAIN is available in 7 colours: fern green, amber, terracotta, brown turquoise, ebony, jade.

PACKAGING AND STORAGE

IDEAL STAINS are available in 5 litre containers. A samples kit (7 colours) is available for trial use.

Under normal conditions and when properly stored, the shelf life of IDEAL STAIN is at least 1 year from the date of purchase. Containers should be tightly closed and stored upright, away from direct sunlight, combustible materials and sources of heat. Stock should be rotated.

IMPORTANT:

All information contained herein is based on the best practical and laboratory. It's up to the customer to determine that the product is suitable for the application they want to. The manufacturer assumes no responsibility for the results of incorrect applications. You should always test on a small area before application. This card replaces the previous. The data can be changed at any time. Also note that the products are intended for professional use Ideal Work Ideal Work provides training and that of their regular customers who request it. Anyone using these products without being enabled, you do so at your own risk.