

Acid Tone Stain

Introduction

There are endless possibilities when colouring concrete using acid stain, no two floors or walls will look the same after treatment. Be creative, customer should expect variable results and not a uniform finish.

How stain works

The acid stain contains metallic salt compounds held in water solution by the addition of just the correct amount of acid to provide the required low pH environment.

When the solution is placed on the concrete, the acid reacts with calcium carbonate and calcium hydroxide (CH) near the surface of the slab.

This reaction causes the stain solution to move toward a neutral pH.

A richer stain colour is achieved if the concrete is stained soon after it is placed. Wet slabs are likely to effloresce which will lighten the colour leaving a mottled effect in some areas where the stain has not taken, this is because efflorescing salts hinder penetration.

In warm weather, the concrete can become hot and dry this does not allow the stain to penetrate as deeply.

On existing concrete, it's important to keep in mind that stains are intended to enhance rather than disguise the surface. They will not mask cracks, blemishes, discoloration, or other flaws. In some cases, that can be an advantage and work well with the design. For example, if you're going for an aged or rustic look, stains can accentuate minor blemishes and cracks and add greater distinction.

An existing concrete slab with major cracks it is usually not a good candidate for staining because any patchwork is likely to show right through the stain. A solution is to cover the concrete with a thin cement-based overlay to create a blank canvas to work on.

Equipment required

Brushes used to apply the stain should be acid-resistant and have uncoloured bristles. If a sprayer is used it should be resistant to hydrochloric acid.

Safety equipment should be worn, including safety goggles, boots, face masks and acid proof gloves.

Surface preparation

Test that the concrete to see if it absorbs water by wetting the concrete in a sample of areas. If the water is not absorbed curing

agents or sealers may be blocking the entry of stains and should be removed prior to stain application.

On existing concrete, ensure the surface is free from grease, oil, caulk and paint. Jet wash the surface to remove any contaminants and clean the area, anything remaining on the surface of the concrete will affect the staining.

Do not use a detergent that contains acid to clean the concrete area as this will reduce the affect of the stain.

Remember, the variegations in tone depend on the composition of the concrete mix and the finish and condition of the surface, as well as the application methods used in applying the acid stain.

Coverage

Coverage is between 5-6 m per 1 litre of acid stain

Stain application

Ensure to carefully mask the surrounding areas to avoid accidental staining as removal of acid stains is near impossible.

Dampen the cured concrete surface

Whilst damp brush or spray the Acid Tone Stain on and allow to dry thoroughly, stains applied by brush will penetrate well but care must be taken to minimise brush marks.

Use a sprayer in a circular pattern, going from left to right and right to left, followed by someone brushing in a circular motion behind the spray, this will give good penetration of the stain

If a second coat of colour is required repeat the same process in which the first coat was applied. Remember to not allow anyone to walk on the floor with shoes after the stain has been applied.

In time, you will notice a residue that will form on the concrete. Do not be alarmed by the residue. It is due to the chemical reaction that takes place between the acid stain and the limes in the concrete and may be present in various colours.

Once the desired affect is complete, wash down the surface with water and mixed detergent to remove any residue and remaining acid, rinse until the water runs clear.

This process is required to neutralise the surface and to enable the sealer to bond to the concrete.

Allow the floor to dry for up to 2 days before sealing.

Applying sealer

For exterior concrete, the sealer should be acrylic based to allow any moisture to escape. Solvent based acrylic sealers work better for outdoor use.

For internal concrete, a water-based acrylic sealer may be used.

For further information on concrete sealers please visit our website www.concrete-sealants.co.uk

Health and Safety

Acid stain contains hydrochloric acid. Irritating to eyes, respiratory system and skin

Keep out of reach of children

Avoid contact with skin and eyes. In case of contact with skin and eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical advice immediately and show this container label

Use in well ventilated areas only

As with all chemical products, care should be taken during both use and storage to avoid contact with skin, eyes, mouth and food stuffs. Contamination can occur from the vapour. Always ensure adequate ventilation during use

If ingested do not induce vomiting, drink plenty of water and seek medical attention

If split absorb in sand or mineral absorbent, wash the affected area with water and rinse liberally