

cleaning decorative concrete surfaces

technical bulletin

Introduction

This technical bulletin sets out procedures for the general cleaning of decorative concrete surfaces.

General maintenance and cleaning are highly recommended to ensure many years of enjoyment from your decorative pavement.

Water Washing

Hosing your pavement with a garden hose is ideal for removing general dust, dirt and grime. For areas which appear not to come clean, lightly scrubbing the pavement with a stiff bristled bush or broom may help in loosening the dirt.

Detergent Water Washing

If washing the pavement as described above does not achieve the desired effect, using a household washing up liquid in warm water is the next step.

Mix a bucket of warm soapy water, and pour on the most affected areas. Again, lightly scrubbing the pavement with a stiff bristled bush or broom may help in loosening the dirt.

Hose the pavement with plenty of fresh water to remove any soapy residues.

Please Note: Detergents which contain bleach or solvents are not suitable for cleaning decorative surfaces as they may adversely affect the sealer coat.

High Pressure Water Cleaning

Use of a commercial high-pressure water blaster is recommended in cases where the pavement has major dirt ingress, or prior to resealing.

Care is required when using high-pressure water blasters, as excessive water pressure may mechanically damage the decorative surface.

Pressures less than 1500 PSI are recommended.

Oil and Grease Stains

These can be difficult to remove because these products penetrate rapidly into the decorative surface. Even sealed pavements only have short lived protections because the chemicals in the oils and grease will break down the sealer.

If an oil spill occurs, stop it spreading by quickly covering it with an absorbent material. Treat the stain with a "degreasing" compound according to the manufacturer's instruction as soon as possible.

Rubber or Tyre Marks

The best method of removing tyre marks and other black stains is with Fauxtex Tyre Mark Remover.

Soak a clean rag with Tyre Mark Remover. DO NOT pour Tyre Mark Remover on the stain. Wipe the black tyre mark working towards the centre of the stain with the soaked rag.

Turn rag regularly and do not attempt to clean an effected area with a previously used rag.

Reseal treated area with Fauxtex Brand Sealer if required.

Please Note: Personal protection such as rubber gloves are required when using Fauxtex Tyre Mark remover and Fauxtex Sealer.

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Common causes of concrete cracking

Anyone familiar with the use of concrete during construction can tell you that there are many variables involved with the finished concrete product that directly affects its appearance and strength. The most important of these variables include; a) type of cement, b) ratio of water to cement, c) type and size of aggregate, d) type and proportionate amount of admixture, and e) various conditions and/or actions occurring during the mixing, placement, finishing, and curing.

Mixing cement and water with aggregate (sand, gravel, crushed stone) and other substances (admixtures) produces concrete. When the cement and the water are combined, the mixture begins to harden (hydration). The concrete becomes hard and solid with its compressive strength progressively increasing over time (curing period). Concrete cracking is generally categorised as occurring either in the plastic state or in the hardened state.

Plastic Shrinkage Cracking

Plastic Shrinkage cracking is produced when freshly placed concrete is subjected to rapid moisture loss. This may be the result of a combination of factors during finishing, and curing such as; a) air and concrete temperatures, b) humidity, and c) wind velocity. When the moisture from the surface of freshly placed concrete evaporates faster than it can be replaced by bleed water (rising water in the mix) the surface concrete shrinks. Due to restraint from the concrete below, the drying surface layer develops tension stresses resulting in shallow cracks of varying depth. These cracks may later develop into full depth cracks.

Being mindful of prevailing weather conditions, achieving good compaction and recognised curing methods can assist the reduction of plastic shrinkage cracking.

Plastic Settlement Cracking.

Settlement Cracking occurs when concrete in the plastic state continues to settle after its initial placement. Where the concrete is locally restrained from downward movement by reinforcing steel, formwork, or previous pours, voids and/or cracking develop adjacent to the restraining element.

Good concrete compaction methods at the time of placement may avoid a common cause of plastic settlement cracking.

Hardened state cracking

Thermal Stress cracking results when temperature variations due to weather exposure generally occur in the hardened concrete. Thermal expansion or contraction in hardened concrete may cause cracking; especially where connections provide restraint and no provision has been made for the elongation or shrinkage of the member over time.

Allowance for the movement induced by temperature gradients should be made by supplying properly designed joints allowing freedom of movement and correct detailing on the plans. These same joints can also alleviate cracks due to movement induced by creep in concrete, resulting from a long-term increase in strain or elongation under sustained loading.

Although any crack may be considered unacceptable by the homeowner, a standard has been set by Standards Australia. AS 2737-1993 Guide to residential pavements, Section 5.2 Table 1 stipulates that any crack which is less than or equal to 1.5mm in width is deemed acceptable.

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colour matching FAQ

technical bulletin

What influences the colour of a job

There are a number of factors that can influence the final appearance of colour other than the batch of colour used. Many of these are out of your control and may include:

- Surface texture
- The hue of underlying concrete
- The way concrete cures on the day
- The influence of surrounding areas
- The amount of colour used.

What can I do to minimise colour differences on a new job?

Always use the same batches of raw materials. This applies to colour hardeners, release agents, sealers and other materials. If multiple concrete pours are required always use the same readymix supplier and the same batch formulation whenever possible. Minimising the time between pours can also help.

Use the same finish if possible and if treating any area of pavement (eg acid washing, sealing, resealing, solvent scrubbing etc) treat the entire pavement in the same way.

Try and use a consistent amount of colour hardener across the job and avoid 'patching' areas after it has cured.

What should I do when I need to colour match a new pavement with an old one?

Colour matching can be difficult due to the above factors. You may not notice any difference until the new pavement has cured and by that time it can be difficult to rectify.

A break between the two pavements may help minimise the impact of these differences – a different colour header, a feature or a garden between the slabs.

Can I use coloured sealer to match a job.

It is not recommended that coloured sealer be used to match a job. Coloured sealer is a different type of product and is less influenced by the factors mentioned earlier. So it can often look significantly different to the surrounding pavement.

If you are considering using coloured sealer it is recommended the entire area is treated to help colour consistency. Always remember, unless masked, coloured sealer will also colour the stencil lines.

What if I am using Cover-tex?

If possible, try and apply Cover-tex on the entire area to be resurfaced. If a new slab is going to be poured next to an old one that is going to be resurfaced, the best results are achieved when the new area is allowed to cure (minimum 28 days) and the entire area (old and new) are sprayed together. If that is not possible then the factors influencing Fauxtex may also apply.

What should I do if I have to put a new pavement next to an old one?

If you cannot include a feature or a break or apply the surface on the same day then always discuss the possibilities with your client and make a note in the contract.

Where can I get more information?

If you require further advice or help regarding colour matching or any other aspect relating to Decorative Technologies products, please contact our Technical Services Department on 02 4735 6477 or technical@dectech.com.au.

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