

The logo for ARMCON, featuring the word "ARMCON" in white, bold, uppercase letters inside a blue rectangular box with a slight 3D effect.

ARMCON

Lime Bloom/ Efflorescence

- How to: Reduce it

The ARMCON logo and tagline, "ARMCON CERTAINTY: IN CONCRETE", in white text on a blue background.

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CERTAINTY: IN CONCRETE

How to Reduce Lime Bloom / Efflorescence:

Top Tips

- Use a water proofer in your mix
- Use insulating blankets to help the concrete cure properly
- Allow the concrete time to cure
- Use a plasticising agent
- Seal the finished product

Overview

Efflorescence produces a white stain white-ish discolouration that can appear to be like a powder or like the soapy scum that appears on your paving or other new concrete products.

It is a problem that has been affecting producers of concrete ever since it has been created.

The white staining is a carbon carbonate (or salt) that is produced with the mixing of the cement in the paving, fencing etc and the environment. This salt then makes its way to the surface of the concrete producing the staining.

Lime bloom or efflorescence does not have always look the same. The stain is sometimes powdery, sometimes milky, sometimes very strong and visible. It can cover a large area as well as being in between the bricks (mortar).

Efflorescence or lime bloom is a natural phenomenon resulting from the reaction between cement and water which produces calcium hydroxide 'lime'.

Although the lime bloom or efflorescence is not harmful and is unattractive, the effect is temporary. How temporary is the big question – There is no way of knowing how long the effect will last, only know that it will pass eventually – this could be a week, or it could be 3 years, it really depends on the concrete. Once it has finished, it has finished.

The best way of preventing lime bloom is in the manufacturing process of the concrete.

Preventing Lime bloom:

Once lime bloom is taking effect there are ways to improve its appearance, however lime bloom is best solved by a good mix for the concrete in the first place.

The best way to reduce lime bloom, which is not helped by water retention in the concrete, is to use a water

reducing plasticiser, this will reduce the amount of water in your mix making the concrete stronger (whilst using the same amount of cement) and more flowable.

Also using a water proofer will help and protect against the water getting into the concrete.

Once the concrete has been produced use a good sealer to seal the product. This will go some way to helping the lime bloom.

Unfortunately lime bloom cannot be completely prevented as the salt crystals come from the lime that is used to produce cement. Your best bet is try to follow the above tips and hope that your concrete will not succumb to lime bloom