

## LIME BLOOM

### What is lime bloom?

All cementitious materials are susceptible to lime bloom, which appears as thin white patches or as an over-all lightening of colour. The latter is sometimes mistakenly interpreted as units being made in of a lighter colour.

### Cause and prevention

Lime bloom happens when free 'lime' in the form of calcium hydroxide (which is slightly soluble in water) migrates to the surface as the material dries out. On reaching the surface it reacts with carbon dioxide from the atmosphere to produce a surface deposit of calcium carbonate.

Masonry blocks, Cast Stone and Precast units should be protected from rain as much as possible. At the end of the day work should be covered, this is particularly important in the case of hollow blocks to avoid saturation. Prevention of excessive moisture will reduce the risk of lime bloom which is generally attributable to a build-up of moisture within the wall.

Lime bloom is sometimes referred to as efflorescence, which is not the same, as that refers to water soluble salts which are brought to the surface by excessive wetting.

Lime bloom is not detrimental to the performance of the building and is an aesthetic issue only.



Lime staining.

### Remediation for lime bloom

Lime bloom is transient and normally disappears as a result of normal weathering, rainwater being slightly acidic dissolves the deposits over a period of time. The length of time will depend upon factors such as rainfall and exposure of site etc.

### Lime staining or weeping

The cause of lime staining is similar to lime bloom, however, prolonged saturation will cause a build-up of carbonated material. The source is more often from the mortar joints which can leech across the face of the surrounding masonry.

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### Remediation for lime staining or weeping

#### **NB: Not applicable to polished masonry**

We would urge caution: when applying any cleaning methods it is advisable to carry out a test area before commencing upon the main work. Always start with the least aggressive treatment and then proceed to the next. Firstly commence with a general cleaning down with water and sugar soap and a bristle (not wire) brush.

If the problem still remains when the stonework is dry then you can use Geocel ECOCHEM. Ensure that you follow the manufacturer's instructions and wet up first and always use weaker solutions first and increase as necessary, scrub off with cold, clean, water; do not leave product to dry in. Rinse off thoroughly.

As a last resort use CMI Mortar Cleaner. This is an acid based cleaner and care should be taken with its use. Again follow manufacturer's instructions, wet masonry, use weak solutions first, increasing strength as necessary. Notwithstanding manufacturers instructions, only allow the product to remain on masonry for a very short time before rinsing with a hosepipe (repeating the treatment as necessary) as high pressure washers can 'blast out' the fines on the surface resulting in swirling patterns which cannot be removed (refer to Technical Information Sheet 2- Pressure Washers).

Please ensure that you protect adjacent surfaces and obtain all information regarding Health and Safety regarding the use of these materials and follow the recommendations.

#### **A note on efflorescence (water soluble salts).**

Similar in appearance to lime bloom, efflorescence is best left and allowed to weather away. Water Soluble Salt efflorescence tends to disappear when wet as it returns to a soluble form, some may soak back into the masonry and reappear to a lesser degree as it dries. After a few weathering cycles the salts have often completely disappeared.

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