

General Efflorescence, or lime bloom as it is also known, is the name given to the white surface staining which may occur on materials containing cement or natural minerals that have been dried or cured in cold, damp conditions (i.e. UK winter conditions).

Lime bloom does not result from a fault in the product but rather from the intolerance of cement to certain conditions during its early stage of hydration.

BS 5262 Code of Practice for External Renderings clauses 34.1 and 47 confirm that Lime Bloom is a phenomenon that may affect cement products.

This occurs more often when these products are subjected to damp conditions and/or low temperatures during early curing. The result is a thin film of what is essentially lime on the surface of the product, which does not affect the integrity or strength of the material.

The effect of Lime Bloom, also referred to as efflorescence, is initially unsightly, but will weather away naturally over a period of time providing that the elevations are exposed to the elements. This weathering process may be accelerated by washing the affected area with a mild hydrochloric acid cleaner used under controlled conditions, as in accordance with the attached method statement.

Any affected surface can be safely left to weather or improved or treated (the sole detrimental effect of efflorescence being aesthetic rather than structural).

Free Lime, produced by the hydration process, is only slightly soluble and the weathering process may therefore take many seasons without treatment.

TREATMENT DESCRIPTION

Application of diluted hydrochloric acid onto the affected surface and the thorough washing and removal of the soluble chlorides, produced by the chemical reaction of the acid.

EQUIPMENT

Any water pressure washer/hose pipe, garden spray (5litre type), and access equipment for all areas requiring treatment.

MATERIALS

- (a) Copious supplies of clean tap water
- (b) Brick cleaners containing 16-18% hydrochloric acid solution (Bondit or Cementone Brick and Patio cleaner are typical).

APPLICATION

General

The working day areas of application will be dictated by the skill of the operatives and weather conditions; where possible application on individual wall surfaces should be completed as one operation.

Primary Application

- (a) Using pressure washer/hose pipe set at cold, thoroughly soak all affected and adjoining areas. (Whole elevations to be treated, not solely individual efflorescence affected areas).
- (b) Leave until background is still damp but without surface water present.
- (c) If any area dries before application of the acid solution, re-wet and leave to go damp – do not apply acid solution to dry areas of the render.

Second Application (acid)

- (a) Dilute Brick cleaner – one part cleaner, two parts water.
- (b) Using spray set at large “fan”, apply to affected wall ensuring total coverage but where possible avoid diluted solution running down face of wall. (working from bottom up)
- (c) Using a nylon brush work in the cleaner lightly.
- (d) Before any possibility of drying of applied acid solutions, final rinsing should take place, see below. (Working across and then fully down at approximately 2 metre working widths normally proves the best working arrangement).

Rinsing

- (a) With the pressure washer/hose pipe set, immediately and thoroughly rinse off all areas where the solution was applied.
- (b) Keep a sufficient distance to avoid surface damage where highly powerful washer machines are employed.

Repeat (if necessary)

It is the nature of efflorescence that when wet, it is difficult to see. If, after drying, lime bloom is still apparent, repeat entire operation unit acceptable.

SAFETY

- (a) Attention is drawn to any recommendation of the brick and patio cleaner manufacturer.
- (b) Consideration should be given to possible ingress of solution or water to windows or other openings, and all appropriate care and precautions observed.

If manufacturer's instructions are not followed closely, a satisfactory finish may not be achieved, and La Roc will accept no responsibility.